ASSESSING THE ECONOMIC REVITALIZATION IMPACT OF URBAN DESIGN IMPROVEMENTS: THE TEXAS MAIN STREET PROGRAM

A Dissertation

by

TANER RECEP OZDIL

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2006

Major Subject: Urban and Regional Science

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Approved by:

Chair of Committee,	Andrew D. Seidel
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ABSTRACT

Assessing the Economic Revitalization Impact of Urban Design Improvements:

The Texas Main Street Program. (May 2006)

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The relationship between urban design and economic activity is seldom studied through empirical studies with a large number of cases due, in part, to the implicit and intangible nature of design. This study was intended to understand, analyze, and evaluate the complex relationship between the design and the economic revitalization of downtown districts with reference to the 78 active Texas Main Street Program districts. First, the design, promotion, organization, and economic restructuring components of the Main Street Program's comprehensive four-point approach were investigated. Next, the economic changes that occurred within those districts were analyzed from 1997-2001. Finally, employment, the number of jobs, the number of business establishments, the number of sales tax permits, the retail sales volume, and the commercial property values were compared for the same time period among three categories of cities: those active in the Main Street Program, those formerly active but now inactive, and those who have not participated.

Findings revealed that several positive changes occurred in design, promotion, organization, and economic restructuring components of the four-point approach within

the active Texas Main Street districts. It appears that these changes produced several positive outcomes for the physical, social, and economical environment of the active Main Street districts. Moreover, the findings suggests that these changes in the Main Street districts resulted in an increased economic activity, not only within the Main Street district by generating jobs, or producing private and/or public investment, but also across the Main Street city by creating community wide economic activity in most of the variables that were under investigation. The results indicate that the Texas Main Street Program, part of which is urban design oriented, is having a positive effect on economic activity within the active Main Street districts.

DEDICATION

This dissertation is dedicated to my parents, Mualla Özdil & the late Tahsin Atıl Özdil,

and my sister, Hülya Özdil,

who have supported and guided me in all of my endeavors in life.

This dissertation is also dedicated to the members of both Özdil and Saraç families.

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I would like to show my appreciation to my uncle Yılmaz Özdil for fully supporting the decision of making this dream come true. I would also like to give special thanks to my dear friends Işılay Civan, Burçhan Bayazıt, Canan Tunca-Bayazıt, and Andrea and Robert Stone who have been there for me both during my hardships and my joy during college.

Lastly but most importantly, I would like to show my special gratitude to my sister Hülya Özdil, who believed in me and supported me every step of the way. She has been my sole driving force during my worst moments in life. I could not have achieved this point in life without her unconditional support.

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CHAPTER I

INTRODUCTION

This study is to understand, analyze, and evaluate the complex relationship between the design and the economic revitalization of downtown and neighborhood districts with reference to the Texas Active Main Street Program cities. First, the research investigates the design, promotion, organization, and economic restructuring components of the Main Street Program's comprehensive four-point approach to each Main Street district. Next, it systematically assesses the economic changes that occur within those communities to analyze the level of economic impact of the Program during the five year time period, 1997 through 2001. Finally, the research evaluates the design factors that may contribute to the overall economic improvement of the Main Street district and the Main Street Program city.

Statement of the Problem

> The state of Main Street is strong! While challenges always remain, people and businesses continue to discover and strengthen their historic Main Street districts. It does not happen overnight, but over the past 22 years, Main Street revitalization efforts have created 227,000 jobs and 56,000 businesses and have saved 89,000 historic buildings all across the country. It shows that preservation pays.
>
> Kennedy Smith
> (Main Street Center, Press Release, 2002)

This dissertation follows the style of the *Journal of the American Planning Association.*

These words of encouragement came from the Director of the National Trust's Main Street Center. Annual studies conducted by the National Trust for Historic Preservation's National Main Street Center, since 1997, indicate the continuing economic rebound of historic downtowns and neighborhoods commercial districts participating in the Main Street Program throughout the United States and Canada (National Main Street Center, 2002).

Things were not as promising for most American downtowns in the early 1940's as they are today. In the early nineteenth-century country living within driving distance of downtown was a luxury of the wealthy few. More recently this dream became a reality for the average American family. The mass production of the automobile and affordable public and private transportation allowed millions of middle class American, following World War II, to raise their children in the peaceful neighborhoods of suburbia. This migration to the suburbs had a serious adverse physical, social, and economical impact on downtown areas.

Main Street and the central city have changed significantly as a result of the increasing numbers of automobiles, spreading transportation arteries, urban sprawl, and the growth of suburbs and shopping malls. Central Business Districts (CBD) once the heart of the social, cultural, and economical life of the urban America suffered the most by dispensing much of its viable pieces to newer urban areas and the urban periphery. Most small towns and large cities in the United States went through different experiences in this transformation but ended up with a similar consequence, decay of the downtown.

Larger city centers were left to the low-income residents. Jacobs claims low-income housing projects in the cities are the new concentrated centers of delinquency, vandalism, and social hopelessness (Jacobs, 1962). Those who were fortunate enough to afford transportation and quality housing moved to the suburbs. They returned downtown only to work or to shop. Over time these trips become less desirable with increased crime, less available parking, and more travel time to inner cities. Other vital elements of the downtowns started to shift to the periphery; work places moved to office parks, shopping, entertainment, and so called public life moved to shopping malls.

On the other hand, small towns and their CBD's had other problems. Heady outlined those problems in his article in *New Priorities* in 1973. Swanson et al. shared in *Small Town and Small Towner's* the view that the Rural America, in the context of small towns, is in the process of underdevelopment –losing ground relatively and absolutely, in labor force, population, capital inflow, commerce, community structure, and income generation from its pinnacle of a half-century ago (Heady, 1973 in Swanson et al., 1979).

In the early twentieth century most of the small towns were dispersed on and around major transportation nodes (train stations); they were viable because of their significant role in the collection and the distribution of the goods. Their economic vitality relied heavily on agriculture, mining and later the industrial revolution. The introduction of heavy machinery to agriculture, mining, and mass production sectors, in the early twentieth century, the initiation of the Federal-Aid Highway Act of 1954 made two major impacts to those small communities. The first initiated a loss of jobs in these

communities; the latter initiated the shift of collection and distribution centers from former nodes, Main Streets, to new transportation nodes near highways.

The few viable industries, businesses, and retailers left in small town centers, eventually were forced to move to areas near major highways and bypasses. New businesses in the periphery had a competitive advantage over the mom and pop stores on the Main Street because of their external economic resources and ability reduce costs, given the economies of scale, availability of mass production, and distribution. Further, these new relocated businesses were of little benefit to these communities since often they were dispersed outside of the city limits. This caused a breakup of local communal identity, history, and heritage. Profits earned by these external sources also left the community. As a result, smaller city's central business districts became economically, socially, culturally, and aesthetically disadvantaged since there weren't enough job opportunities to sustain local populations, and generate opportunities for the existing businesses.

As a result of these challenges facing the Main Street and the CBD's municipalities, private organizations, state, and federal governments generated and experimented with several revitalization ideas (such as urban renewal) for both large and small cities. Revitalized Main Streets have taken several shapes from pedestrian malls, to shopping malls, to entertainment districts as a result of these relentless efforts in the second half of the 20th century. The objective was to bring the lifestyle and the vitality back to Main Streets and Central Business Districts. Instead, these revitalization efforts have produced few successes, but mostly there were no significant changes or continued downtown decay in the CBD's. James H. Kunstler in his book *The Geography of Nowhere* refers to

this time period as the days when the shopping malls started to multiply across the United States, the public realm had been pretty much eliminated from the American scene and yet the hunger for public space remained (Kunstler, 1993).

According to Francaviglia, during the 1960s and especially the 1970s two seemingly opposed trends reshaped Main Street: progressive modernization continued, while historic preservation became a potent force. The Historic Preservation Act, with its subsequent amendments, provided both funding and expertise to owners of historic structures, was passed by the Congress in 1966 (Francaviglia, 1996).

The Main Street Project was initiated by the National Trust for Historic Preservation in 1976. The intent was to realize and emphasize the importance of revitalization by unifying the image that could be recreated with the preservation and rehabilitation of historic commercial buildings (Smith et al., 1996). The program started with three communities as Main Street pilot towns (Hot Springs SD, Galesburg IL, and Madison IN) to test the new dimensions of downtown revitalization. As a result of these initial efforts National Main Street Center was established in September 1980 under the umbrella of National Trust for Historic Preservation.

Texas was selected as one of six demonstration states (Colorado, North Carolina, Massachusetts, Georgia, Pennsylvania, Texas) out of the 38 reviewed, for the newly developed National Main Street Center. The Texas Main Street Program (TMSP) for Small Cities (population under 50,000) was established in 1981 under the Texas Historic Commissions' National Main Street Center (See Appendix B.1 for selection criteria for

Small Main Street cities in Texas). An Urban City Program (the cities with population over 50,000) was initiated in 1989 (See Appendix B.2 for selection criteria for Urban Main Street cities in Texas). From the five original communities that were selected as service networks in 1980, the TMSP has reached out to over 147 communities during its twenty-two years of service (See Appendix C.6 through C.9 for the listing of the Main Street Program cities in Texas). Currently, the National Main Street Center of the National Trust for Historic Preservation includes over 1600 Main Street communities in the USA and Canada with populations ranging from 453 to 4 million. Each is actively involved in revitalizing its historic downtown and neighborhood commercial districts.

The National Main Street Center goal is to provide administrative guidance and service, where as TMSP, with local managers, provides hands-on technical guidance, support, and service to the communities of Texas (See Figure 1.1). The National Main Street Center has developed (and TMSP followed) a *Four Point Approach* that seeks to provide a comprehensive method of helping communities in four targeted areas: design, promotion, organization, and economic restructuring (Smith et al., 1996).

The methodological approach of Main Street Program to downtown revitalization provides number of cities and regular documentation that would allow one to understand, analyze, and evaluate the complex relationship between the design improvements and the economic revitalization of various downtown districts.

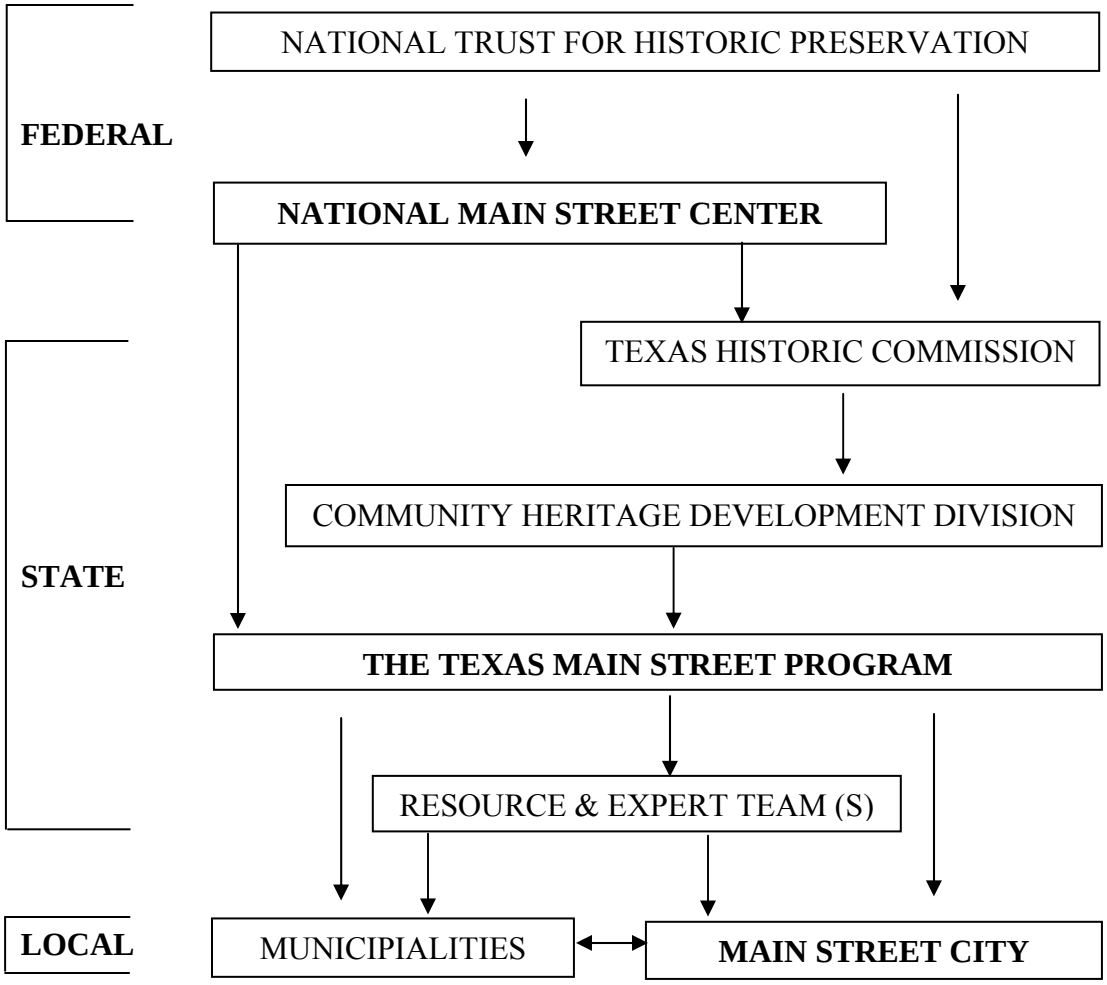


Figure 1.1 Structural Organization of the Texas Main Street Program

This study broadly investigates whether design improvements in Main Street program cities create economic changes? Within the framework of this overall question the study is specifically concerned with the identification and impact assessment of those design improvements on economic revitalization of the Texas Active Main Street Program city downtown and neighborhood districts. Through the integration of a systematic approach, the research is first to investigate the degree of design, promotion, organization, and

economic restructuring components' of Main Street Program's comprehensive four-point approach was utilized by each individual Main Street district. Then, it is to assess the economic changes within those communities and cities to further evaluate the level of economic contribution of the Program for the period between 1997 and 2001. Thus, the research addresses the design factors that may influence the overall economic climate of the Main Street City and the downtown district.

Significance of the Study

Main Street and the central business districts, in small or large cities, in the US have long been suffering from the adverse impact of automobiles, highways, suburbs, and shopping malls. Downtown US has undergone countless rehabilitations, revitalizations, and renewal programs, for over half a century, to erase these negative effects. In this regard, design has been a major tool for downtown revitalization. However, the contributions of design or design factors to overall revitalization efforts in the quantitative sense usually have not been adequately analyzed or were poorly assessed. There is a need for systematic research and evaluation methods in the design process (Holden, 1996; Francis, 1999; Lang, J., 2005, 1994, and 1987; Marcus and Francis, 1998; Moughtin, 1999; Zeisel, 1981) to better understand and evaluate downtown revitalization efforts.

Urban design is an emerging scientific discipline that addresses the issues of design and the relation between the individually built pieces. It is a discipline born as a result of the necessity to recognize the interrelatedness of the pieces that builds the city (Hedman and

Jaszewski, 1984; Lang, 1987). It is a field where the scientific research methods have to be explored rigorously because of its hitherto limited base. That is why there is a need for better understanding of systematic and scientific evaluation methods under the framework of urban design (Moughtin, 1999; Holden, 1996; Lang, J., 1987).

The National Main Street Center is a 25 years old federal program that addresses the problems of central and neighborhood business districts, and claims to have a viable approach for revitalization by incorporating design as part of its comprehensive approach. However, its viability cannot be proven until its approach is explored using systematic and scientific research methods. There is a need for a comprehensive and scientific evaluation research that assesses the effects of the four-point approach components to better understand the impact that they may contribute to economy of participating cities within the Main Street Program.

In the light of the above needs and concerns, several issues will be addressed in the following chapters:

- This research will provide new information for a better understanding of Urban Design Theory and Practice.
- Knowledge gathered in this area of research is usually common sense. Researchers are reluctant to provide quantitative and empirical results in terms of generating design criteria and evaluating them systematically. The study is expected to provide a basis for new design factors and standards for the systematic design evaluation in urban design and landscape architecture.

- The Texas Main Street Program (TMSP) will be introduced to urban design discipline, and literature. Thus new design principles and criteria will be generated for the design of the Main Street districts.
- This study can highlight the significance of the four-point approach and its components in the revitalization process of the TMSP cities.
- The study will elaborate on the significance of design, in detail, in the revitalization process of the Main Street Program in Texas.
- The economic significance of the Main Street Program revitalization process with in the district, and within the corresponding Main Street city will be defined and measured.
- This study will provide a better understanding and provide better measures of success for the economic revitalization of Main Street Program cities.
- Each Main Street town in Texas will be evaluated independently as a result of study. Thus, this assessment can contribute to the decision-making process for each revitalization effort.

The broader goal of this study is to address the problems facing downtown and the Main Street Programs by using factors that have been emerging from design, and specifically from urban design disciplines, to better understand and evaluate Main Street and downtown design.

The Scope of the Research

This study sets three main objectives listed below:

Research Objective 1: Four-point Approach

The study aims to identify and evaluate the variables that makeup the design, promotion, organization, economic restructuring components of the four point approach. Special emphasis is given to design.

Research Objective 2: Economic Impact within the District

In addition, the research focuses on the economic changes that occurred within the Main Street districts for the cities that were involved with the program five year or longer.

Research Objective 3: Economic Impact within the City

Finally, the study aims to compare the economic changes within the active Main Street cities to those formerly active but now inactive Main Street cities, and those who have not participated in the Main Street program (See operational definitions below).

Operational Definitions

Texas Main Street Program (TMSP): It is the state program that interacts with the National Main Street Center. TMSP is responsible for providing technical guidance, support, and service to interested Texas cities, and their managers. The program is also accountable for reporting cities progress to National Main Street Center.

Main Street Program City Managers: They are the city employees who are trained and supervised by the Main Street Center, and the State Program to coordinate and administer the downtown organization, promotion, and economic redevelopment activities at the local level (See Texas Urban Main Street City Application Guidelines in Texas Main Street Program, 2001).

Four-point Approach: According to Smith et al. in *Revitalizing Downtown* it is the preferred approach to downtown revitalization, and is based on four points: Design, Promotion, Organization, and Economic Restructuring (Smith et al., 1996). It is a method developed by the National Main Street Center and adapted by the TMSP to guide, and help to revitalize the cities in the four primary indicative areas of concern.

Design: Involves consideration of the visual inbuilt opportunities by focusing on all the downtown physical elements: buildings, storefronts, public spaces, landscaping, displays, etc (Smith et al., 1996).

Promotion: Focuses on improving retail sales events and festivals, and creating a positive public image of the downtown in order to attract various stakeholders to downtown such as shoppers, investors, developers, and businesses (Smith et al., 1996).

Organization: Involves establishing cooperation among various groups in Main Street city, such as public, city and county governments, local bankers, merchants, property owners, and community leaders (Smith et al., 1996).

Economic Restructuring: A process that proposes, develops, and implements policies to strengthen the economic assets of existing businesses, and to diversify economic

activities with new businesses by providing funds for improvements, retaining and expanding existing businesses, converting unused and underused properties to productive ones, and educating downtown business people (Main St. City Application Guidelines 2001; Smith et al., 1996).

The Eight Principles of Main Street: These are the underlying values followed by the Main Street Program (See Appendix B.3 for the detailed explanations of the Eight Principles of Main Street).

Texas Main Street City: Refers to any city in Texas that has completed the selection process and has satisfied all the basic requirements of both National Main Street Center and TMSP, and is eligible to become a member to the program. Thus the city is qualified for the systematic guidance and service provided by the National Main Street Center and the TMSP.

Small Main Street City: A Main Street city with a population under 50.000 when first admitted to the program. Small cities must maintain at least one managerial position at all times.

Urban Main Street City: A Main Street city with a population over 50.000 at the time it is admitted to the program. Urban cities must maintain minimum two managerial positions.

Self Initiated Main Street City: It is a city that is not selected but that is following the Main Street Program rules and regulations. TMSP accepts self-initiated cities in both small and urban city categories.

Active Main Street City (Active MSC): A Main Street City, Small or Urban, that fulfills the basic requirements, and is currently involved in the Main Street Program. For example, Main Street cities with a population under 50.000 must maintain a one full managerial position.

Graduate Main Street City: An active Small or Urban Main Street city that has successfully completed the initial stage of the program and maintains its active membership. This period for a small town Main Street Program is three years and for an Urban Main Street City program the period is five years.

Former Main Street City (Former MSC): A Small or Urban Main Street city that has dropped out of the program as a result of its failure to fulfill some of the basic requirements of the Main Street program. For example, not maintaining the minimum managerial positions or not reporting reinvestment statistics monthly may cause cancellation of membership.

Non-Main Street City (Non-MSC): Refers to any Texas city that has not been part of the Main Street Program (See Appendix A.1 for the US Census definition of places). Based on the US Census counts at 2000 there are 1512 places in the state of Texas (US Census, 2003b; Texas State Data Center, 2003). 1368 places of those places are considered non-Main Street city in this research.

Main Street District: It is the area within the Main Street city limits that is designated by the city government in the application process of the city to be a Main Street Program.

(See Appendix A.1 for the additional Glossary of terms).

Basic Assumptions and Limitations

Assumptions:

- The researcher is impartial and unbiased in collecting and analyzing data.
- The instruments used in this study are able to measure the effect of urban design elements on economic revitalization in active Texas Main Street Programs.
- The respondent's surveyed share their objective views and honestly answer the questions posed to them regarding the study.
- The time-series data collected from the archives of the TMSP and other Governmental and State Agencies is accurate and complete.

Limitations:

- The primary scope of this study is limited to Main Street Program, Main Street districts, city, and their managers in Texas.
- Since the survey population is limited, there is a chance that the number of responses to the questionnaire will be inadequate for a satisfactory statistical analysis
- The effect of urban design elements on economic revitalization (such as on the total private reinvestment and jobs created variables) is limited to active small city and urban city programs that started in the Main Street Program before 1997.
- Since the managerial position conditions are unknown for the former TMSP cities, they will not be included in the study.
- TMSP managers may not have adequate background information, knowledge, or expertise regarding some of the surveyed factors.

- Although social and environmental values of urban design are considered to be important, these dimensions of value were not explored within the scope of this research (See Carmona, in Macmillan (ed.), 2004 for more discussion on the broader definition of value of urban design).

Dissertation Outline

Chapter II reviews the related literature in four broad categories. The first section discusses Urban Design theory, and the concepts of systematic research in Urban Design. Section two covers central business district, downtown and Main Street literature. Section three focuses on studies that specifically examine Main Street Programs. Section four reviews the components of the four-point approach components: Design, Promotion, Organization and Economic Restructuring.

Chapter III examines the central ideas that constitute the core of this study. Three predefined research objectives are investigated by this study. These are physical changes in the Main Street districts, economic changes within the Main Street districts, and economic changes within the Main Street City.

Chapter IV documents the methodology and detailed procedures used by the study. This chapter explains the basic characteristics of the study area and the population under investigation. It explains how some of the basic instruments such as questionnaire, Main Street Program archival data, and governmental data have been structured and treated. The chapter closes by explaining the methods of data cleaning, validation, integration, and manipulation.

Chapter V explains the findings of the research. Analyses start with questionnaire findings such as Main Street Manager profiles, and four-point approach components. Next the Main Street Reinvestment data is examined. Finally the State and Federal data for Jobs created and retail trade are analyzed. The chapter concludes with the presentation of the comprehensive findings to explain the changes in the Main Street Program districts and cities.

Chapter VI summarizes the study, followed by a discussion of the main conclusions. This chapter concludes with the author's recommendations and suggestions for continuing research.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter highlights the theoretical and methodological underpinnings of this research. To do so it reviews the reported research and literature related to field of urban design, downtown, economy and urban design, and finally the Main Street Program with its four-point approach. The chapter is divided in to four sections. The first section discusses the literature in relation to the definition and the theory of urban design in broad terms, and its conceptions and approaches of systematic research. In the second section, the focus is directed to the conception and the approaches to downtown areas and in particular on Main Street literature. Section three concentrates on studies that highlight the Main Street Program and in particular TMSP. The final section focuses on the summary of the limitations of the existing research and matrices of the variables that make four-point approach components; design, promotion, organization and economic restructuring.

Urban Design

This research resides within the context and definition of the term urban design, and the developing urban design theory. First, the term “urban design” which currently presents an "ambiguity” (Madanipour, 1997 & 1996; Lynch in Banerjee and Soutworth, ed., 1990) and “lack of cohesive theoretical foundations” (Sternberg, 2000) must be put into perspective within the historical context of design literature. Thus, it is necessary to

elaborate on the contribution of the urban design field to this particular research, and the input of this study to the field of urban design.

The Precedent

Although urban design is relatively a new term, a new discipline, and an area of practice recognized fully in the 20th century, the earliest recorded examples of concerns and solutions within the realm of urban design practice, date back to 13th century. According to Gosling, one of the earliest recorded building laws, that established urban design guidelines, is a 1262 statute regulating the forms of houses fronting the Piazza del Campo in Siena, Italy (Gosling and Gosling, 2003).

Early precedents of the planned cities in the United States with urban design implications, date back as early as 1573 to the Spanish settlements planned in accordance with the Laws of the Indies. Gosling points out that the early planned cities, which were the first to use a gridiron system in the US, were Philadelphia, Pennsylvania in the late 17th century and Savannah, Georgia at the beginning of 18th century. He further cites the early 19th century planning of the University of Virginia, Charlottesville, (with its' continuous colonnade) as an expressive example of the urban design principles in the US (Gosling and Gosling, 2003).

Within the same time frame Sitte's work on *City Planning According to Artistic Principles* in late 19th century Europe (Sitte, 1889), as a wider recognition of the planned cities that have an urban design influence in the US, and that could be ascribed to Columbian Exhibition (Chicago World Fair) and also the City Beautiful Movement.

Loukaitou-Sideris and Banerjee state that the vision of the ideal city, in this period, was built on the premise of a glorified center (Loukaitou-Sideris and Banerjee, 1998). Despite developing technology and increasing urban population, the movement brought new alternative uses for the cities, such as civic centers and civic open spaces, which helped cities to be more livable. The relationships among the components that constitute the urban fabric found rigorous emphasis during this period, although the impact of the automobile and the modernist movement later in the early 20th caused an abandoned some of these concerns.

Modern urbanism emulated the machine to accommodate an industrial society (Ellin, 1996). In the modernist view of design and planning, physical form followed social function (Madanipour, 1996). According to Loukaitou-Sideris and Banerjee the modernist idea of the city envisioned an urban environment broken into functional segments that constituted the parts of a coherent whole. Instead, she claims the modernist dictated self-sufficient environments (megablocks), creating pieces in a unifying master plan (Loukaitou-Sideris and Banerjee, 1998). James H. Kunstler in his book *The Geography of Nowhere* bluntly criticizes modernism as the worship of machines that sweeps away all the architectural history, and all romantic impulses, jamming all human aspirations into a plain box (Kunstler, 1993).

By the middle of the 20th century urban design emerged as an area of both scientific and professional concern in the literature as a response to the failure of planning methods to produce a satisfactory physical environment in the modern period (Gosling and Gosling, 2003). Lang in his book *Urban Design*, by dwelling on the major concerns of the

modernist period, suggests that the birth of urban design was "…the recognition that the sterile urban environments achieved by applying the ideas of the modern movement to both policy making and to architectural design at the urban design scale were a failure in terms of the lives of the people who inhabited them…" (Jacobs, 1962; Brolin, 1976; Blake, 1977; Huet, 1984; Lang, 1994).

Due to the focus of this dissertation it must be re-emphasized that as the decentralization of central business districts became a more recognized problem in the US in the mid 20th century, the premises and the definitions of the urban design became a more complex and recognized issue by a wider group of 20th century scholars (See *The Evaluation of American Urban Design* for a more detailed review of the evaluation of urban design by Gosling and Gosling, 2003).

The Definition

From the precedent presented above it is not premature to say that the criticism concerning the design and the planning practices of the early 20th century laid the ground work for some of the basic issues that defined the scope of urban design later in this century. The notion of what constitutes urban design evolved from a concept of "form of the city" that focuses on the relationship between buildings, monuments, and public squares as Sitte investigated in his seminal book "*City Planning According to Artistic Principles*" in 1889 (later Bacon in his book "*The Design of Cities*" elaborated architectural space in more detail) and extrapolated to more complex issues that include social, cultural, and economic matters (Sitte, 1899; Bacon, 1967; Barnett, 1974).

The premises of urban design, not exclusively, are widened in the literature to the functions of community space (Gibberd, 1953), human perceptions and experiences of city space (Cullen, 1961; Jacobs, 1962), preservation and revitalization of architectural and urban space (National Historic Preservation Act, 1966), the economy of city space (Jacobs, 1970), the safety of city space (Newman, 1996 &1972), the spirit of a place (Norberg-Schulz, 1979), and the meaning and legibility of city form (Lynch, 1981).

Not surprisingly, the issues addressed within the framework of urban design achieved its broadest coverage during the past two decades as the understanding of the human-built environment relationship with the context of urban form became much more important to the creation of livable urban space. Scholars such as Appleyard, White, Rapaport, began to address the problems of urban form by analyzing human behavior, human interaction with space, and the culture within the architectural space (Appleyard et al., 1981; White 1980, 1989, 1990; Rapaport; 1993).

The growing complexities of urban areas, especially during the past three decades, led to solutions that involved physical and social reconstruction, and social equity for a better human environment and a better urban form. The concerns of the urban form addressed the human experience and human needs as emphasized in the New Urbanism movement. As noted by Peter Calthorpe in *Pedestrian Pocket* and *Transit Oriented Development* (TOD), and Andrew Duany in the *Traditional Neighborhood Development* (TND) movement as well as policy incentives and frame works oriented smart growth, livable community's movements that shapes the new urbanism (Calthorpe, 1993; Duanny and Plater-Zyberg, 1990; Katz, 1994; Kelbaugh, 2002).

Nan Ellin, in her book *Postmodern Urbanism*, referring to current state of urban design postulates that "…both the urban design theory and the study of society are harking back to their pre-modern humanistic traditions, with implications for the roles of the designer and the social scientist and for their respective methods and goals" (Ellin, 1996). The current humanistic concerns shape the studies reported in the current literature on sustainable urbanism, healthy community, and recent revolutions in communication and transportation technologies. Some of this, starting with Van der Ryn and Calthorpe's work on sustainable communities (Van der Ryn and Calthorpe, 1986), will probably set the context for the definition of urban design in the coming years.

As noted above, for as many concerns that developed in the second half of the 20th century, there are at least as many debates about the issues within the framework of urban design. A concise definition is not the scope of this study, nor from the literature is it realistic to set the scope of the urban design field. However, Madanipour's summary of these earlier "ambiguities" of urban design "…the scale of urban fabric which urban design addresses; visual or spatial emphases; spatial or social emphases; the relationship in between process and product in city design; the relationship between different professionals and their activities; public or private sector affiliations and design as an objective-rational or subjective-irrational processes" (Madanipour, 1997) sets the perimeters of the issues that define the scope of urban design.

The Theory

Theory, in the design literature, is commonly defined as the general description of methods and principles (Lang, 1987; Rowe, 1987; Holden, 1996). Theory summarizes past experience in a set of statements that are explicitly transferable to other people (Zeisel, 1980). It consists of a system of statements that describe and explain a phenomenon or process (Lang, 1994). The design theory seeks to answer questions concerning how physical environment is shaped (phenomenon) and how it can be shaped (process).

With its evolving definition, urban design theory, with its methods and principles, is currently limited. The literature covering urban design, as highlighted in the previous section, is broad and comprehensive. However, as Sternberg claims, much of the writing is in the form of guidebooks or manuals, that rely on rules of thumb, analytical techniques, and architectural ideas whose theoretical justifications are yet to be clarified (Sternberg, 2000).

The field of urban design is concerned with the architectural form, the relationship between the buildings and the spaces created within, as well as with the social and practical issues inherent to these spaces and their relationships. The field encompasses city planning, architecture, and landscape architecture (Lynch in Banerjee and Soutworth, ed., 1990; Lang, 2005 and 1987). The discipline of urban design as viewed in the literature is a specialization within the field of architecture (Lang, 1994 and 1987), as something to be practiced by an architect or landscape architect (Lang 2005; Lynch in

Banerjee and Soutworth, ed., 1990), or as integral part of urban planning (Moughtin, 2003; Gosling and Gosling, 2003; Sternberg, 2000; Toon, 1987). Due in part to these premises, urban design seems to be driven by both the architectural considerations and physical planning theories. Therefore the foundations of urban design theory appear to lie implicitly in the broader design theory and planning literature.

Analytical precedents of architectural and physical planning theories are commonly viewed under both the positive and the normative theory. These theories, a system of statements and principles, are also found in other disciplines, including (not exclusively) social, behavioral, and environmental sciences. The fields of design derive some of their intellectual lexis from this broader literature. However the review of the intellectual domain of this research emphasized the design and planning literature since the scope and the focus of the research is specifically urban design.

Normative theory is based on ideology or worldview concerning how the world works (Lang, 1994). It disseminates prescriptions for actions to be taken about unknown phenomena. The normative process is often driven by faith to achieve the defined ideological result (Lang, 1987 and 1994). It is descriptive and regulatory. Normative theory, as Lang states in his book *Architectural Theory,* deals with the questions like "what ought to be" and "what to do based on what can be conceived of" (Lang, 1987). In Lynch's words in *Good City Form* it deals with "…generalizable connections between values and settlement form, or how do you know good city when you seen one?" (Lynch, 1981). The normative theory is concerned with the views of different designers and schools of thought (Lang, 1987).

Positive architectural theory, on the other hand, deals with ideas of statements that are believed to positively describe and explain the reality (Lang, 1987 and 1994). It is the explicit description and explanation of the phenomena and process being examined. It consists of assertions of truths and explanations of those assertions (Lang, 1994). In positive theory, usually, the prediction of an outcome concerning any scientific phenomena will be achieved by scientific investigation. According to Zeisel, these actions, hypotheses, are starting points for further investigation and explicit provisional suppositions or conjectures explaining empirical research (Zeisel, 1980). The basic goals of positive theory of architecture and urban design are to be value-free, avoid bias, look for alternative explanations, and apply the rules of scientific method to observation and explanation. Thus, through scientific investigation a large number of descriptive statements can be derived from a single explanatory statement (Lang, 1987 and 1994).

Even though there remain gaps and inconsistencies in the presentation of both positive and normative theory in architecture and urban design, Lang postulates that the lack of positive theory in design is the factor that holds back the development of design fields (Lang, 1987 and 1994). Lang sees design fields as normative in character even though ideological bases for their normative position are often unclear (Lang, 1987). Hiller also observes that the current state of most architectural theories are strongly normative, weakly analytic, and states that they are little concerned with how the buildings really are (Hillier, 1996). The professed position of designers and what is practiced, is also a major concern in normative theory (Lang, 1987). Both Lang and Hillier argue the

necessity of empirical knowledge in the design fields (Lang, 1987 and 1994; Hillier, 1996).

Another dimension of the intellectual domain that seems to be addressed in both positive and normative theories of architecture and physical planning are the substantive and procedural concerns of design. The subject matter of urban design includes both the processes of design (Lang, 1994) and planning (Sternberg, 2000), as well as the statements about the environment (Lang, 1994) that make up the natural landscape and the built environment (Sternberg, 2000).

Zeisel in his book *Inquiry by Design*, defines design as "…an ordered process in which specific activities are loosely organized to make decisions about changing the physical world to achieve identifiable goals" (Zeisel, 1980). The intellectual foundation of the procedural theory in urban design is concerned with these design processes as well as with the nature of the practical applications of design. The procedural theory in design is concerned with the decision-making and design process and also with the outcomes (products) of these processes (Lang, 1994; Shirvani, 1985). The procedural theory discusses the nature of the design process as a whole, the nature of human creativity, the nature of analytical, synthesizing, and evaluative processes (Lang, 1987; See also Shirvani, 1985). Steinberg, by drawing his intellectual basis from physical planning literature, explains the concerns of procedural theory for urban design as "how intelligence can be exercised on behalf of the community" (Sternberg, 2000). Both Lang and Sternberg also discuss why good substantive theory is needed to support design and

how it can be complementary to the design process and procedural theory, even though their intellectual bases differs one from to another (Lang, 1994; Sternberg, 2000).

Substantive theory deals with the nature of the phenomena that designers address in their disciplines. It seeks to explain the physical nature of the subject and its functions. It deals with the elements of the biogenic and sociogenic world (Lang, 1994). The nature of the environment and the nature of human spatial and emotional behavior within the environment and responses to it are explained within the intellectual basis of substantive urban design theory (Lang, 1987). Sternberg finds substantial concerns of those inspired by architectural education. He draws attention to broader substantive issues facing the designer, in the physical world driven by the dynamics of commerce and public affairs (Sternberg, 2000).

In summary, based on the literature review and the definition and the theoretical foundation presented in the above sections, this research sees urban design as a discipline and area of practice within the premises of architecture, landscape architecture, and urban planning. It is realized that the theory of urban design as an integration of both architectural and urban planning theories. It is suggestive in the sense that urban design, should follow an empirical approach which, according to Lang in *Urban Design*, "…implies a set of attitudes toward the design process and the way the information base (the positive theoretical base) for making design decision is established" (Lang, 1994).

It is also important to understand that the nexus of urban design research relies on identifiable procedures for achieving the goals that a design must fulfill, and the substantive knowledge to those design principles to meet them (Lang, 1994). Therefore this research targeted both procedural and substantive urban design issues inherent to Main Street Program approach. It is imperative to emphasize that substantive concerns must not be limited to the architectural considerations (such as form, and the elements of form) predominantly stressed within the literature. It needs, also, to engage with the concerns raised in the literature of planning (such as the dynamics of business and public affairs) and landscape architecture literature (such as environmental concerns) to better inform the design and the planning processes.

Research Methods in Urban Design

The purpose of research is to identify and help solve new problems (Zeisel, 1980). A primary purpose of research is to make generalizations about the phenomena (Lang, 1987). Urban design research is also similar to other types of research. It engages with similar concerns to understand some phenomena within the public realm through a set of actions, and to produce tentative generalizations about how to solve given problems.

In line with its definition and theoretical background, urban design research drives its methodological foundations from various disciplines shaped under the umbrella of social, behavioral, and environmental sciences. The field commonly processes its scientific actions, investigative approaches, or methods through the filters of design and planning disciplines borrowed from architecture, landscape architecture, and planning.

These borrowings do not just constitute the basic data gathering techniques of social sciences such as interviews, surveys (Goldsteen, 1994) and community workshops (Laurie, 1986), but also include techniques, experiments, or quazi-experiments (Cook and Campbell, 1979) developed with in the proxies of the environmental and behavioral sciences such as observations (White, 1989) environment behavior studies (Saarienen et. al, 1984; See following pages for a broader urban design literature review).

Design has both tangible and intangible qualities. Thus, urban design research utilizes both qualitative and quantitative approaches, and methods of scientific research to analyze the problems in hand. Qualitative methods imply an intuitive approach (Lang, 1994) intimate knowledge, and acquaintance with the problem (Rossi and Freeman, 1993). Whereas quantitative methods imply the use of observations that readily lend themselves to numerical representations (Rossi and Freeman, 1993) and they are open and presents systematic methods to explain the given problem (Lang, 1994).

The advocates of quantitative research argue that qualitative approaches are favored in the field of urban design; however, they suggest that this needs to change to achieve rational solutions. It is also believed that quantitative approaches should look at the world critically, and with expedience rather than taking a qualitative approach (Ellin, 1996; Lang, 1994). For example, Ellin makes a point in her book *Postmodern Urbanism* that urban designers gradually abandoned the pursuit of pure objects and knowledge through carefully controlled scientific methods. She further postulates that urban designers replaced quantitative methods with qualitative ones (Ellin, 1996). Rossi and Freeman summarize the criticism of qualitative research in social science literature as

being expensive to collect, subject to misinterpretation, and for not being collected across all cases and situations (Rossi and Freeman, 1993).

The advocates of qualitative research argue the strengths of qualitative methods over quantitative ones. Scholarly concerns that are raised about the quantitative methods are generally addressed within the social science literature. The researchers comparing the two approaches emphasize the dehumanizing tendencies of numerical representation as the weakness of quantitative research, and claim the better understanding of casual processes is one of the strength of qualitative methods (See Cook and Campbell, 1979; Lincoln and Guba, 1985).

Further discussion on the contributions and drawbacks of each of these approaches may be healthy but is outside the scope of this research. Both qualitative and quantitative approaches have their valid place in scientific research (Rossi and Freeman, 1993) and in urban design research (Lang, 1994; Ellin, 1996). Based on this review of the literature, the appropriateness of selected method(s) to explain unknown phenomena depends on the research questions asked. Since, one of the major concerns of this research is to derive generalizable insights, addressed earlier as a significant gap to fill in order to fully equip urban design as a functioning discipline; this research identifies itself primarily with the quantitative approach. It is a search for explicit and rational investigation of design and economic characteristics of several active Main Street Program towns within Texas. It is also in the scope of this research that qualitative concerns of these districts are inherent to quantitative approaches.

Another methodological issue that is separate from the tangible or intangible nature of design or qualitative and quantitative character of the methods is the issue of design evaluation. It is widely accepted in the design literature that the design process is not linear, and in layman's terms it involves the programming, the act of design, construction, and evaluation (Zeisel, 1980; Laurie, 1987; Marcus and Francis, 1998). It must also be emphasized that in urban design practice the product commonly is not the designed and constructed work but rather the reports, policies, and guidelines that influence the design process within a given environment (See for example Barnett, 1974 and Holden, 1996 for broader issues surrounding urban design policy and guidelines).

According to Zeisel the practice of design offers at least three avenues of research: research in user-needs for programming for particular project, design review to assess the degree to which designs reflect existing research, and evaluation of the use of a built project (Zeisel, 1981). Even though the design research activities are commonly perceived to be part of the idealistic view of the design process it is an area that is usually neglected due to its difficulties, complexities, and additional costs. Apart from descriptive and explanatory concerns raised regarding urban environment (which will be reviewed in the following sections) there is very little evidence in the literature of what is being done as empirical evaluation research in design, in especially urban design.

The field of architecture took a step in the direction of empirical evaluation methods in the early 1980s. Post Occupancy Evaluation (POE) research systematically aims to assess the performance of physical design elements in a given, in-use facility (Preiser et al., 1988). Physical design elements that are addressed in POE method(s) mainly stem

from the early architectural literature that primarily raised concern regarding built environment and behavior (See for example Osmond, 1966; Sommer, 1969; Hall, 1966). Similarly, the urban design and landscape architecture literature generated lists of critical factors that, over the years, convey the importance of physical design elements (See such as Brambilla and Longo, 1979; Alexander, 1977; Moughtin, 1999; Pushkarev and Zupan, 1975; Rubenstein, 1977; White, 1980). On the contrary, these design elements are not usually built in to the evaluative research methods of as part of quantitative studies for the same disciplines (See Table 2.1 for the lists of design elements driven from the review of the existing design literature).

The methodology employed in this research attempts to overcome these weaknesses by undertaking an empirical approach to urban design. Ellin emphasizes, in her book *Postmodern Urbanism,* that the role of the urban designer is to make rational decisions relying heavily on quantitative data, and to implement these decisions with expedience (Ellin, 1996). This research stresses the use of quantitative analysis by emphasizing that quantification is neither to be feared nor glorified in urban design research (Lang, 1994). The use of glass box techniques that deal with both the tangible and intangible variables of urban design, and with the appropriate concern for their importance, are taken as guiding principles of the research undertaken (Lang, 1994). The broader attempt of this research, via the methodological procedures undertaken, is to contribute to urban design discipline by integrating systematic research and evaluation methods into the design process (Holden, 1996; Francis, 1999; Lang, J., 1994 and 1987; Marcus and Francis, 1998; Moughtin, 1999; Zeisel, 1981).

Table 2.1 Design Literature Review Matrix

Unterman, 1984	**White, 1989**	**Vandell and Lane, 1989**	**White, 1990**	**Rubenstein, 1992**
What factors enhance walking?	A Digest of open-space zoning provisions New York city 1975 Zoning amendments;	Aesthetic aspects of the newly constructed and rehabilitated buildings;	At the end of the research, researcher(s) defines seven factors to increase the use of central plazas;	Design Elements;
Mixed uses	Seating	Quality of materials used in the exterior skin	Sittable space	Scale & Proportion
Restaurants	Planting and trees	Fenestration: composition and scale of the façade	Street Connection	Signs
Compact land uses	Retail frontage	Massing: compositional bulk and scale of the façade	Sun, specifically existence of light	Hard Surface
Sidewalks	Lighting	Design of interior public space	Food source	Bollards, Tree Planters, pots
Activity/people	Circulation access	View of skyline: as seen from a distance	Water, for attraction and relaxation.	Fountains, sculptures, landmarks
Unfolding views/diversity	Access for the physically disabled	Design of exterior public spaces	Trees , for shade, security or protection	Lighting
Public transportation	Food facilities; permitted obstructions	Responsiveness to neighborhood: relationship to abutting uses	Triangulation; major attraction, such as musician, sculpture, or architectural future	Seating
Window shopping	Maintenance	Provision of public amenities		Shelters, Canopies, Umbrellas
Nearby destinations		Design quality of the original building		Facilities
Short cuts		Appropriateness of the renovation to the original structure		Traffic Parking , transportation
		Quality of the rehabilitation		Vegetation

Table 2.1 Continued

Bookout et al., 1994	Marcus et al. 1998	Oppewal and Timmermans, 1999	Oppewal and Timmermans, 1999
Value Matrix for Landscape Elements;	Design Review Checklist for Urban Plazas;	Attributes and Levels to Describe the Appearance, Layout, and Furnishing of Shopping Areas;	Perception Response Categories for Public Space;
Streetscapes	Size	Compactness	Appearance
Parking lot Landscaping	Visual Complexity	Proportion of Shopping area indoors	Location
Extra parking	Uses and Activities	Proportion of shopping area that is reserved for Pedestrians	Selection of Food Stores
Signage	Microclimate	Crowding in Shopping area	Selection of clothing and shoe stores
Plantings (gardens)	Boundaries	Decorations and furnishing in the shopping area	Pattern
Water features	Subspaces	Amount of Greenery	Indoors
Entryways	Circulation	Maintenance of streets, hallways, and buildings	Pedestrians
Land engineering	Seating	Proportion of storefronts with attractive window displays	Crowdedness
Street furniture	Planting	Number of activities in the street	Greenery
Plazas	Level Changes	Number of coffee shops, cafes, and restaurants	Decorations
Street patterns	Public Art		Maintenance
Environmental features	Fountains		Window Displays
Lighting (decorative/safety)	Sculpture		Activities
Interior atria	Paving		Coffee Shops
Special plantings (flowers)	Food		
Hardscape features	Programs		
Active recreation (tennis, etc.)	Vendors		
	Information & Signs		
	Maintenance & Amenities		

The Subject Matter of Urban Design Literature

In line with the arguments raised earlier, the coverage and the extent of the design literature is important but it needs more clarification of the specific research problem at hand due to the limitations of this particular study. The broader research question undertaken here is concerned with whether physical design improvements create economic changes. More specifically, it is concerned with the assessment of the economic revitalization impact of urban design improvements on TMSP cities. This particular focus engages the existence of three subject areas of concern under the design and urban design literature. These are the downtown and Main Street literature, economy and urban design literature, and Main Street Program literature. The following section is a review of these three areas to better respond to the research question in hand.

Downtown and Main Street Literature

One of the primary concerns that the literature review yields was the absence of quantitative evaluation research for downtowns and Main Streets. Downtowns and Main Street districts are complex settings. The design evaluation studies and literature for downtowns and Main Streets are broad, but limited in covering only the key concerns addressed in this research.

Researchers addressing this area attempt to analyze downtown design conditions in various depths. Some recognize the geographical differences in the experiences of downtowns and compare European and American downtown streets and malls

(Rapoport, 1993; Robertson, 1993; Hajdu, 1988; Uhlig, 1979; Brambilla and Longo, 1979); others measure individual factors, such as traffic, human perception and behavior, and climate related issues for the downtown settings (Chiquetto, 1997; Bosselmann et al., 1995; Lynch and Rivkin, 1979; Nasar, 1998; Pushkarev and Zupan, 1975; White, 1990, 1989, 1980). Other researchers made qualitative cross sectional studies of Main Streets and urban streets (Lapilato II, 2003; Rubenstein, 1978, 1992; Brambilla and Longo, 1979), while still others qualitatively evaluated individual cases and districts (Jacobs, 1992; Rapoport, 1990; Robertson, 1994). Obviously the literature presented above is the most pertinent compilation of the available literature. One of the commonalities of the published research in this subject area is its qualitative and descriptive nature. There are several outstanding conclusions that could be drawn, and various taxonomies of physical design elements and factors that could be generated from these design studies (Francis 1999; Marcus and Francis, 1998; Rubenstein, 1992; Oppewal and Timmermans, 1999; White 1990, 1989, 1980).

Some of these authors address the importance of the systematic evaluation approach to design by using case studies and post occupancy evaluation approaches (Francis, 1999; Marcus and Francis, 1998; Moughtin, 1999). Yet, there is little empirical research reported in the literature that focuses on the systematic evaluation of design in the context of downtowns or the Main Street districts. The literature is particularly sparse when it comes to the evaluation of more than a few cases.

Economy and Urban Design

Similar to the broad scope of urban design literature, the economic considerations of a city, small or large, have been of scholarly concern (See for example Jacobs, 1970; Swanson et al., 1979; Kemp, 2000). Revitalization efforts also have been on the agenda of public and private interest groups to enhance economic activity in any given city (See for example Bright, 2000; Downtown Development Handbook, 1992; Gratz and Mintz, 1998; Frieden and Sagalyn, 1994; Keating and Krumholz, ed., 1999; Williams et al., 2001). Yet, the economic value of urban design is seldom studied as part of quantitative research due, in part, to the implicit and intangible nature of urban design. Although design improvements, usually within the scope of revitalization efforts, is widely practiced to enhance the quality of downtown and Main Street settings so as to add economic value, there are few studies that attempt to explain the parallels between the two.

There are only a few cases reported in the literature, due to complex and intangible nature of the urban design and economic activity relationship. The studies undertaken in this area are commonly broad qualitative examinations of existing urban areas and their economic concerns, or are qualitative or quantitative case studies of a single urban district. The following examples highlight a few of these attempts to summarize the work reported in the literature in this area of study.

One of the earlier empirical investigations was Vandell and Lane's work on the relationship between design and value for 102 Class A office buildings within the United

States. In their research, Vandell & Lane postulated that rent and vacancy are functions of both design and non-design characteristics. They found that there is a strong influence of design on rent. However, the relationship was weakened when it comes to design quality and vacancy behavior. They further indicated that profitability of good design might be attained, but it is risky due to high cost of good design (Vandell and Lane, 1989). Even though Vandell and Lane used the term urban design, they used a small number of design variables to measure design quality, and focused mostly on factors that relate to the building itself as design quality indicators (See Table 2.1). The study had very little to say concerning the pedestrian level design improvements and the amenities within the public space.

Another study attempted to explore the value of design improvements by looking at eleven projects in the United States. Bookout et. al in *Value by Design* reviewed seven residential projects, two office buildings, and a single mixed use project to assess the value of good design. This collection of case studies focused on the development, the construction costs, and the operating expenses of these newly built projects (Bookout et al., 1994). The study was promising in documenting and assessing a list of landscape elements to assess design improvements (See Table 2.1 for the list of indicators). However, the relationship between design improvements and value was not clearly explored and analyzed.

Two other qualitative studies published in Great Britain in mid 90's also focused on the relationship between economic activity and urban design. Tiesdel et al. critically reviewed historic urban quarters in Europe and analyzed both design and economic

activity as part of revitalizations efforts of historic urban quarters (Tiesdel et al., 1996). Hubbard in his qualitative case study evaluates the improvements in urban design quality in Birmingham, England and suggests the potential contribution of urban design to the rejuvenation of a local economic development (Hubbard, 1995).

In an experimental study that models consumers' perception and preferences in shopping centers in the United States, Oppewal and Timmermans studied the effect of several design attributes. From the models he developed he found that the level of maintenance, the attractiveness of window displays, the number of street activities, and the amount of greenery had a significant impact on the pleasantness of shopping areas (Oppewal and Timmermans, 1999).

One of the most prominent research studies on the value of urban design was conducted in Great Britain in 2000. Carmona et al., utilizing qualitative techniques, explored the linkage in between better urban design and enhanced economic value. This study primarily focused on several stakeholders' views on six case studies of varying urban design quality. They looked at seven urban design objectives (character, continuity and disclosure, quality of the public realm, ease of movement, legibility, adaptability, and diversity) as quality indicators of better urban design. The research concluded that better urban design adds value from the perspective of key stakeholders (See Appendix A.1 for the definition of the term value by Carmona et al., 2001). It also indicated that good urban design adds economic value by the increasing economic viability of development and by delivering social and environmental benefits (Carmona et al. 2001, 2002a, 2002b; Carmona in Macmillian, ed., 2004). This particular research utilized interview and

survey techniques to underpin the research question. Carmona et al. discussed the importance of quantitative data such as rental rates, capital values, vacancy rates, and take-up rates as key economic value indicators to assess the impact of urban design. However they haven't utilized those quantitative data sets in this research to draw rigorous conclusion due to the small number of case studies (Carmona et al., 2002a).

In summary the literature reporting in the area of urban design and economic value was limited to a few studies that are principally descriptive in nature, context-specific, or applicable to only small number of cases. Even though the importance of quantitative data for both design and economic value is addressed in most literature, (See such as Carmona et al., 2002a; Eppli and Tu, 1999; Bookout et al., 1994) there has been no attempt of any significance made up to date to assess the economic value of urban design improvements.

Main Street Program Literature

The third subject area addressed in the existing literature, and was of particular concern to this research, was the literature that addressed the Main Street Program. The limited previous research addressing the effectiveness of the Main Street Program and the principles of the four-point approach, and the role of the design in the Main Street Program was a significant concern. At first glimpse, the literature seems to have produced substantial research focusing on the Main Street Program. However, in depth review revealed an abundant focus on descriptive, explanatory, and case specific, distinct from being empirical, value-free, independent, and systematic approaches.

Furthermore, most of the Main Street Program literature was authored by the stakeholders who ran the program at the local, state, and national level, or who have a vested interest in the effectiveness or success of the program. The next section explains some of the basic concerns developed from this literature review.

The organization, the management, and the function of the Main Street Program are broadly covered by descriptive, educational, and guiding studies in the literature. For example, some of the earliest documents (manuals, guidelines, and reports) concerning the program came from the in-house studies of National Trust for Historic Preservation and National Main Street Center. One of these early texts is the *Main Street Training Manual* which presents a prescription on how to revitalize Main Streets based on the findings of three pilot studies conducted by Shlaes and Company in 1977 (National Trust for Historic Preservation, 1981). One of the latest and most comprehensive works is the in-house study *The Main Street Approach to Downtown Revitalization.* Smith et al., from the director of the Main Street Program point of view; it explains and sets the guidelines for the Main Street Program (Smith, 2000; Smith et. al, 1996).

The literature also presented descriptive, educational, and guiding studies outside the program itself (See such as Crankshaw, 1994; Francaviglia, 1996; Kemp, ed., 2000; Moe and Wilkie, 1997; Smith, 2000; Smith et al., 1996). For example, Francaviglia, in his book *Main Street Revisited,* evaluates precedents of Main Street. Moe and Wilkie, in their book *Changing Places,* review a limited number of Main Street Program cities and successful strategies for neighborhood, downtown, and Main Street renovation (Moe and Wilkie, 1997). Kemp (ed.) in his book the *Main Street Renewal*, focusing on more than

Main Street Programs, collects several articles that concentrate on the organization and the management of small city downtowns, and list the tools applicable for downtown renewal. He also provides a list of case studies on Main Street renewal, and presents conclusions on successful Main Street renewal efforts.

The assessment of the effectiveness or success of the Main Street Program is also broadly covered in the literature (See such as Ayres and McSpadden, 2004; Alanen and Melnick, ed., 2000; Robertson, 1999; Moe and Wilkie, 1997; Dane, 1997; Houstoun, 1997). However, the literature reviewed presented many ambiguities and broader concerns due to varying definitions of effectiveness and/or success employed by scholars and self-interest groups.

The question of effectiveness or success seemed to be two fold for the Main Street Program: One is the effectiveness of the program in comparison to other downtown development strategies, and the other is the internal program effectiveness. Even though the effectiveness of the Main Street Program in comparison to others strategies, as implicitly stated by the qualitative reviews (such as Moe and Wilkie, 1997), only one empirical study on the effectiveness of the program was found. Robertson, in his 1999 national survey of 57 small city downtowns, found the Main Street approach was the most successful of the 16 downtown development strategies employed (Robertson, 1999). This presents a serious concern for a 25 year old program that is proclaimed a success in its endeavors (See National Main Street Center Web Site).

On the other hand, there are several Main Street evaluation studies published by interest groups and scholars that are concerned with the effectiveness and success of the program within the city, the group of cities, a state, and the nation. The meaning and the measure of the effectiveness or success vary from case to case. The definition or the measures of success are mostly based on the interests of the author investigating the problem. This extends from the social concerns such as the public function, environmental issues, and the architectural form to economical well-being of the Main Street district. The following section briefly summarizes the significant reported work that pertains to this research in this area.

One of the earliest Main Street Program review studies examined the Georgia Main Street Program and was published in 1989. Kenyon documented downtown morphology, pedestrian activity, preservation activity, and downtown businesses activity in 21 Georgia Main Street cities (population ranging from 3,000 to 43,000), and explained the changes taking place in the transition from being a business district to becoming social district through historic preservation (Kenyon, 1989). Another study of importance examined nine inactive Iowa Main Street programs. Baxter in her assessment study systematically analyzed the early closing of these Main Street Programs and concluded that inadequate leadership was a contributing factor to failure (Baxter, 1996).

Two sets of qualitative studies, that represent most of the case study literature on the effectiveness and success of Main Street Program, were published in the mid 1990's (See such as Houstoun, 1997; Dane, 1997). These studies report on the success of the individual towns by analyzing each city as an individual case study. These descriptive

works are beneficial and contribute to the investigation of changes in the Main Street cities in the United States; however, the syntheses of cases are weak and it is difficult to draw explicit conclusions concerning the Main Street Program (Houstoun, 1997; Dane, 1997).

The economic benefits of historic preservation have been broadly articulated by the reports published by the National Trust for Historic Preservation. As an example, in *The Economics of Historic Preservation* by Donavan D. Rypkema focuses on the economic value produced by the preservation movement. He does this by reviewing available literature and then drawing key conclusions into what he considers 100 most convincing arguments supporting historic preservation as an economic activity (Rypkema, 2005).

Two external studies, both conducted by the Regional Science Research Corporation of Rutgers University, focused on the economic impact of State Historic Preservation Programs in New Jersey, and in Texas. Although the particular focus of this research was on historic preservation, both studies, especially the Texas study, laid the ground work for a systematic approach on how to assess the economic impact of the Main Street program. Both studies utilized the Input-Output (PC I-O) analysis to estimate the investment made within the Main Street District, the state, region, and the nation (See Chapters III and IV for a more detailed discussion of this model). The economic impact, as stated by this study, relied only on the reinvestment statistics collected from the TMSP cities. This study didn't differentiate benefits between the active program cities and former program cities (The Center for Urban Policy Research, 1997 and 1999).

Smith, in her dissertation research, took a different approach in evaluating effectiveness or success. In her research on Kentucky Main Street programs she sought factors that contributed to the active or inactive status of 37 Main Street Program cities. By utilizing logistic regression she concluded that downtown business vacancies, whether or not the downtown was within the influence of metropolitan area, and the composition of Main Street Leadership position are the two contributing factors, of the 13 she examined, to program's status in the program (Smith, 2000).

Another evaluation of a Main Street Program was published in 2001 by the Russell Consulting Inc. for the Wisconsin Main Street Program. In this study researchers conducted surveys and interviews with the Main Street managers, and utilized Return On Investment (ROI) economic impact modeling techniques to evaluate 13 start up, 17 graduate (involved with the program more than five years), and 13 inactive (dropped out) Wisconsin Main Street Program cities. The study concluded that Main Street programs had financial and non-financial benefits for their communities. Although the study was a comprehensive evaluation that made the distinction among the program status of the cities, it was lacking in the economic impact analysis (ROI) due to this model's limitations (Russell Consulting Inc., 2001).

Another set of significance literature was the Main Street Trend Survey Summary Reports. These were self-evaluation studies conducted by the National Main Street Center annually (National Main Street Center, 2002). The economic activity review surveys have been sent to all Main Street Program managers in every active program in the US and Canada annually since 1997. Main Street Program managers were usually

asked their perception of changes relative to the economic activities taking place in their communities. The summary findings are reported annually through the National Main Street Center Website (See http://www.mainst.org/). This year-to-year report illustrated only the type of economic changes that took place in the Main Street Program cities rather than exploring underlying reasons of economic change in these cities.

A significant nationwide study, conducted in the same period as this research, was Robertson's empirical examination of the four-point program. In 2001, Robertson surveyed 100 (40 replied) selected Main Street Program communities from 15 different states. He asked Likert scale questions regarding design, organization, promotion, and economic challenges to Main Street Manager's. He also asked questions about the effectiveness of the strategy followed in these four areas of concern. He visited four of the sites to view, first hand, the working of the Main Street program. His purpose was to provide empirical evidence about how communities actually applied the four-point approach. His research emphasized the importance of knowing the workings of the four-point approach (Robertson, 2004).

Although Robertson's comprehensive, empirical research is found to be valuable to explore the four-point approach it was limited in explaining the national impact of the Main Street Program., study focused on the components of design, promotion, organization, economic restructuring in several states, it seemed to have methodological limitations to interpret the working of four-point approach. First, the study failed to explain nationwide concerns, due in part, because the cases were not representative of the whole Main Street program population. The cities surveyed were not randomly

selected from the entire pool of available Main Street Program cities (According to Main Street Trend Survey in 2001 there were approximately 1600 cities in the program in 48 states). Even though Main Street programs are run nationally, and promotes one definition and explanation for four-point approach, the ways the four-point approach is applied or interpreted by the individual programs varies from state to state due to pragmatic concerns such as the program budget , the size of the staff, the number of program training sessions given to the city, the type of available help from the state program in each of four area of concern, varying state tax policies, etc. (See Table 2.2 Budgetary differences among State Main Street Programs). This is why state based research provides more meaningful results in Main Street Program research.

The Literature Regarding the Texas Main Street Program

As reviewed in the previous section, there are only a few published works that address the TMSP. Similar to overall the Main Street Program literature, most of the literature regarding the Texas program was descriptive, educational, and guiding studies produced in-house by the Main Street Program itself. Although, the literature was useful for elaborating the problems, it was limited in explaining the research questions at hand.

An early report on the revitalization of TMSP was published in-house in 1986. Flory and Mullen wrote a guideline on how to revitalize small towns in Texas based on the review of the TMSP cities. The book addressed the design of the Main Street district, explained the Main Street Program approach, and gave suggestions on revitalization of Main Street

district of Texas. The purpose of this work was to guide towns that were interested in revitalization (Flory and Mullen, 1986).

Table 2.2 The Other States' Main Street Program Statistics

Program* State	Member Since	Number of active cities	State Staff No.	2001 Budget & Trend	Main Street Only Budget	New Communities Accepted
Texas	1980	78	9FT, 2PT	$431,191 (30% increase 5 years)	$431,191 [100% of D]	5/year
North Carolina	1980	49	4	$165,000 (stable)	$165,000 [100% of D]	4/evey other year
Arkansas	1984	17	6.5	$410,000 (stable)	$389,500 [95% of D]	When they are ready
Iowa	1985	33	3FT, 1 PT 1 half-time contract	$450,000 (stable)	$450,000 [100% of D]	Average 1-2/year, no pressure taking new each year
Oklahoma	1985	34	8	$670,000 (20% increase over 5 years)	$670,000 [95% of D]	2-3/year
Wisconsin	1987	30	4.5 FTE & 2 PT	$473,700 (stable)	378,960 [100% of D]	3/year
Mississippi	1989	39	4 FT, 1PT, & 1contract	$431,500 (reduced in past 2 years)	$388,350 [90% of D]	Approximately 3/year
Illinois	1993	59	9	$1.2 million (slight increase)	$1,200,000 [100% of D]	No set number 6 taken last year
New Hampshire	1996	17	4.5	$500,000 (increased)	$400,000 [80% of D]	3/year

* Other than TMSP the data in these tables retrieved from "An Evaluation of the Wisconsin Main Street Program" by Russell consulting, Inc., September 2001 (Russell Consulting Inc., 2001).

Another set of documents, also as a result of in-house program efforts, was the Research Team Report's by the Texas Historic Commission for every Main Street Program city in Texas. These reports were prepared by a team of Commission staff members and experts, after visiting newly initiated TMSP cities that were still in their first year. These reports provide a definition of Main Street Program, the working of the four-point approach, a brief summary of the critical issues observed in any given city by the team;

team suggestions and recommendations were also given (See such as Resource Team Report for San Antonio, 1998).

A significant independent scholarly works about the TMSP is the *Historic Preservation at Work for the Texas Economy* and was published in 1999. As stated earlier, the primary objective of the research was to assess the economic impact of the historic preservation in Texas. However, this research also provided important qualitative and quantitative information about the workings of the Main Street Program in Texas (The Center for Urban Policy Research, 1999).

The Texas Main Street Program (TMSP) has been a subject examined by only a few thesis studies (See such as Brown, 1986; Ranwala, 1993; Murray, 2002). These mainly concentrated on the policy, historic preservation, and tourism side of the program. For example, the most recent Master Thesis, published in 2002, was a qualitative study that reviewed the policies of the Main Street Program and the Historic Preservation in Texas. This study provided limited information concerning the economy and the design of the Main Street Program cities in Texas (Murray, 2002).

Consequently, as highlighted earlier, there is little evidence of independent, empirical, and systematic evaluation research in urban design, Main Street Program, and more specifically in the TMSP literature. The review of both design and urban design literature was able to generate a list of design elements of significance that can further be explored in the scope of this study (See Table 2.1).

The review of both the Main Street Program and TMSP literature provided a comprehensive survey of the program, its application, and its success (See such as National Main Street Center, 1996a, 1996b, 1996c, and 1996d). The previous literature shed light on the nature of the four-point approach, and the reinvestment statistics data that could be used to explain economic growth. In the light of the sources highlighted by the literature review, matrices for design, promotion, organization, and economic restructuring elements were generated (See Tables 2.3, 2.4, 2.5, and 2.6). The index of variables summarized from these matrices, along with the summary of broader design literature review matrices generated in the earlier section (See Table 2.1), were used to create Main Street Program Questionnaire.

As a result of this literature survey it appears that previous researchers inadequately elaborated on program effectiveness and the workings of the four-point approach. Better clarification was needed. The link between overall economic growth of the Main Street District and design, promotion, organization, or economic restructuring of the TMSP has not been addressed using systematically organized, scientific research. Thus, more work is needed regarding urban design practices and the effectiveness of the Main Street Program in order to better understand the relationship between design, promotion, organization, and economic restructuring components of four-point approach and economic changes urban design is experiencing.

Table 2.3 Main Street *Design* Literature Review Matrix

Texas Main Street Handbook (Flory and Mullen, 1986)	**Smith et al., 1996**	**Main Street Committee Members Handbook: Design (National Main Street Center, 1996a)**
Elements of Building Design & Public Improvements;	Elements of Downtown Design	Seven Step to Successful Storefront Design
The upper façade	Buildings: Store front design, façade improvements	Consider the entire building
The street façade or the storefront	Public Improvements: Sidewalks, streets, lights, fountains, benches, planting, utility lines & poles, and etc.	Take cues from the neighbors
Awnings	Signs: Public information, and private business,	Change dramatically with color
Sidewalks	Parking: On street spaces, public and private lots, & garages,	Integrate facades with awnings
Lighting	Graphics: Logos, posters, advertisements, and etc.	Develop focal points with lighting
Landscaping		Change image through signs
Streets		Use windows to inject vitality
Furniture		
Parking lots		
Public parks		
Signs		

Table 2.4 Main Street *Promotion* Literature Review Matrix

Texas Main Street Handbook (Flory and Mullen, 1986)	**Smith et al. 1996**	**Main Street Committee Members Handbook: Promotion (National Main Street Center, 1996d)**
The Main Street approach identifies four major types of promotion essential to downtown revitalization:	Three basic types of promotion necessary for a strong downtown revitalization program;	What does the Promotion Committee Do?
Promotion of the downtown revitalization program	Retail promotion: Retail sales, & Retail events	Understanding the changing market - both potential shoppers and your "competition"
Promotion of a unified and positive downtown image	Special events (Traffic building events)	Identify downtown assets - including people, buildings, heritage, and institutions
Promotions designed to generate retail sales	Image-building promotion Design to combat negative perception Establish marketing identity	Defining Main Street's market niche-its unique "position" in the market place
Special downtown events & celebrations		Creating NEW image campaigns, retail promotions, and special events - to lure people back downtown

Table 2.5 Main Street *Organization* Literature Review Matrix

Texas Main Street Handbook (Flory and Mullen, 1986)	**Smith et al., 1996**	**Main Street Committee Members Handbook: Organization (National Main Street Center, 1996c)**	**Main Street Committee Members Handbook: Organization (National Main Street Center, 1996c)**
Why organization?	In its most basic form, a successful local Main Street Program should have the following characteristics:	To succeed your committee must take responsibility for managing the financial and logistical aspects of nonprofit organization by:	Organization committee roles;
Telling the story of the historic central business district	A clear, shared sense of mission and a well-defined set of goals and objectives	Raising money-for projects and administration, form donations and sponsorships. Components: General appeals, sponsorships, memberships, contract for services, special assessment districts, endowments	Holding meetings- to identify community resources, develop strategies, and brainstorm ideas
Asking the city and the county for help in problem solving on major issues, such as parking	Broad-based community representation in an advisory capacity	Managing staff and volunteers - by recruiting people, supervising them, and rewarding good work. Components; Hiring & evaluation	Visiting business people -to solicit their support and update them on the program's plans
Establishing a working relationship among downtown merchants, professionals, & property owners & offering management to the group	A well-thought-out work plan based on the four points of the Main Street approach	Promoting the program-to downtown interests and the public Components; media, materials, presentations	Talking with the media- to answer questions, give them fresh news, or gather data
Promoting the downtown as a center for retail and business and also for special events and celebrations	A Commitment to work, & succeed, over time	Managing finances -by developing good accounting procedures. Components; Bookkeeping, Budgeting, Reporting	Meeting with board members to oversee development of financial budgeting and tracking systems
	Committed, dependable funding		Coordinating groups- to help launch fund-raising campaigns and volunteer recruitment
	Widespread community support		
	Full-time management		
	A distinct constituency		
	Working committees		
	Public-private partnership		

Table 2.6 Main Street *Economic Development & Restructuring* Literature Review

Texas Main Street Handbook (Flory and Mullen, 1986)	**National League of Cities, 1991**	**Smith et al., 1996**	**Main Street Committee Members Handbook: Economic Restructuring (National Main Street Center, 1996b)**
Definition: Economic development is rebuilding downtown's sagging economy to compete in today's market.	**Definition:** Local economic development is the term for the process in which local government engage to stimulate or maintain business activity & employment.	**Definition:** The economic restructuring component of the Main Street approach involves strengthening the downtown's existing economic base and gradually expending it.	**Definition:** The economic restructuring means finding a new purpose for Main Street's enterprises.
Main Street identifies three main goals necessary to bring about a full economic comeback for downtown:	Economic development programs help communities adjust to changing economic times by:	Economic restructuring activities typically include:	The Economic Restructuring Committee's five major responsibilities are;
Retaining, upgrading, and expanding existing businesses	Preserving and stimulating existing businesses	Develop appropriate incentive programs to stimulate commercial and real estate development	Learning about the district's current economic condition & identifying opportunities for market growth
Changing the tenant mix to better serve local shoppers	Helping the community expand and diversify its economic base	Study local market conditions, identifying areas of opportunity and designing strategies to built on those opportunities	Strengthening existing businesses and recruiting new ones
Filling up empty spaces	Removing barriers to economic growth	Helping existing businesses find better ways to meet their customers' needs and expand to meet market opportunities	Finding new economic uses for traditional Main Street buildings
	Encouraging new business growth in the community	Recruiting new businesses to complement the downtown's retail and service mix and boost the downtown's overall market effectiveness	Developing financial incentives and capital for building rehabilitations and business development
		Finding new or better uses for underused or vacant downtown buildings	Monitoring the economic performance of the district
		Stabilizing and Improving the value of downtown real estate	
		Repositioning the downtown in the market place and effectively promoting it	
		Develop long-term economic development strategies for the continued evolution	

CHAPTER III

RESEARCH OBJECTIVES AND METHODS

This chapter focuses on the core objectives and methods of this research. Three predefined research objectives were investigated 1) the systematic investigation and assessment of the four-point approach factors with special emphasize on the physical changes, 2) the economic impact within the Main Street districts, 3) the economic changes within the Main Street city. This study first elucidates each research objective. Next it addresses the method employed to achieve the study objectives. These steps are used with each research objective investigated. Data collection and detailed procedures are presented in Chapter IV.

Methods

As elaborated in the literature review chapter III was no single method or model encountered that systematically assessed the economic impact of design for the 78 cities studied; they differed in size, morphology, and socio-economic conditions. As indicated previously, there were several quantitative and qualitative studies in the literature that examined the issues by looking at either design, or economy related to revitalization issues, for individual cases or a small number of cities. However, it was promising for this research that there were some qualitative urban design studies that looked at both design and economy for small numbers of cases. The in-depth literature review lead to the belief that meaningful systematic research of this magnitude had to

adopt reliable methods and models that were developed for the design and economy related issues in order to achieve the desired objectives.

To test the objectives, this researcher believed that a program, in operation for over twenty years and following a systematic four-point approach to downtown revitalization, was a logical starting point. Moreover this program used the same basic criteria to select its cities, treated all of these cities with a similar systematic agenda, and valued design and economy as two of its comprehensive four-point agenda.

In addition to a qualitative review of downtown revitalization history and the Main Street Program, and passive observations of downtown districts through out the United States, a three-step analysis was developed to understand the relationship in between design and economic revitalization in active Texas Main Street cities. The city population and growth was taken into consideration for detailed comparison among communities for the period 1997 through 2001 (Figure 3.1 Assessment Strategy).

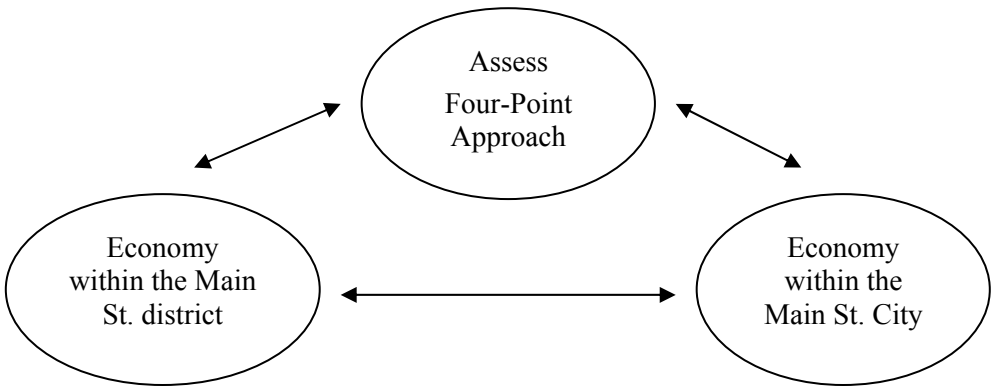


Figure 3.1 Assessment Strategies

Research Objective 1: Four-point Approach

This step systematically identifies and evaluates the changes in design, promotion, organization, and economic restructuring components of the four-point approach. All active Main Street cities in Texas were investigated. Special focus is given to design related factors in these communities. This information was examined in detail according to the extent of involvement with the program (less than five years and more than five years at the time research was being conducted).

Assessing the Changes in Relation to Four-point Approach

As stated earlier, the four-point approach developed by the National Main Street Center was adapted by the Texas Main Street Program (TMSP) to lead, and assist revitalizing Main Street program cities. The four areas of concern were design, promotion, organization, and economic restructuring. The four-point approach, including the eight principles of the downtown revitalization, was found to be a significant starting point since it is the core of Main Street Program style revitalization (Appendix B.3 Eight Principles). This approach not only leads to a comprehensive look at downtown issues but also set definitive boundaries for a systematic approach to revitalization. However, the clarity in the broader vision was not deterministic of what actually happened in those communities in relation to design, promotion, organization, and economic restructuring.

The four-point approach indicators of the proposed research were systematically explored through a literature review and by use of a survey questionnaire (See

Literature review tables for design, promotion, organization, economic restructuring in Chapter II). The purpose of the questionnaire was to gather data from the Main Street managers of each community concerning the specific details of (changes in) design, promotion, organization, and economic restructuring. A Likert scale questionnaire was employed since it is a systematic and refined means of constructing indexes (Babbie, E., 1990). A scale of response boxes from 1 to 5, "significantly decreased" to "significantly increased", was provided along with each individual variable in question (Appendix C.5 Texas Main Street Managers Questionnaire). These indexes were later used to determine the effect of the individual variables rather than the intensity of the variables or the response patterns among them.

The design section of the questionnaire was a composite of physical elements that were addressed and analyzed in the Main Street program design literature and in the urban design literature over the last two decades. The design efforts of the Main Street Center and Main Street Programs were first summarized (See Table 2.3 Main Street Design Literature Review Matrix). Later, an in-depth review of the physical design elements was achieved through a systematic urban design literature review (See Table 2.1 Design Literature Review Matrix). The collection of design indicators from both of these sources was analyzed and combined into a single index to give a comprehensive measure for design to assess Main Street Program efforts in Texas.

A similar approach was utilized to identify and assess the elements of promotion, organization, and economic restructuring. These indicators were also composed of specific variables that were addressed by the Main Street Programs and the National

Main Street Center (See Tables 2.4, 2.5, and 2.6, Literature Review Tables for Promotion, Organization, and Economic Restructuring). A comprehensive index of variables was extracted from the literature for each indicator and was used to assess the effect of promotion, organization, and economic restructuring on Main Street Program efforts in Texas.

Several statistical models and methods are reviewed with other researchers, where necessary cases were run, to test the research objectives. These statistical methods included categorical analysis, linear regression, log linear regression, logistic regression, multiple regressions, and multivariate regression. These analytical methods often found a place in urban, and social science research and researchers examined the correlation among number of variables for several cases. However, for this study, I concluded that the total number of cases in relation to numbers of variables under investigation and Likert scale limitations (categorical data) exceeds the comfort level of most analyses. Furthermore, condensing Likert scale variables to a few broad categories create complications that obscured the research objectives and adversely impacted the study reliability.

Therefore this study focused on frequency and some probability calculations of the questionnaire responses. Systematically collected data was tabulated and analyzed using Microsoft Access and SPSS (Statistical Package for Social Studies). Data collection and treatment procedures are explained in Chapter IV. Findings, resulting from this analysis, were reported in terms descriptive statistics, tables, and graphics in the results chapters.

Research Objective 2: Economic Impact within the District

The research is to identify and assess the economic changes that occurred within the Main Street districts of Texas Main Street cities. The amount of private reinvestment and jobs created within the Main Street district boundaries were examined. This research focused on the program cities that have been in the program for five or more years and have populations less than 250,000.

Assessing Economic Changes within the Main Street District

The survey data provided tangible information on the four-point approach components, and especially for design. However, an additional quantitative assessment was needed to depict the changes occurring in the economy within the districts of interest. Community archival reinvestment statistics data was used to capture the economic changes of active within the Main Street Program districts. This information was obtained from the TMSP. This data included the number and dollar amount of buildings rehabilitated, newly constructed buildings, public/private joint ventures, buildings sold, number of jobs created, and new business start-ups, relocations, and expansions for each Main Street city (this data set is explained in detail in chapter IV).

The analysis of the data is summarized in two forms to better understand the changes in the economy and the impact of the program on the active cities in the period 1997 through 2001. First and foremost archival data was analyzed using simple descriptive statistics. The cumulative results were reported for Active Main Street Cities. The amount of investment, both public and private, made as a result of involvement with

the Program was examined. Second, part of the data set that was thought to have a ripple effect on the economy was investigated using the PC I-O Model of the Regional Science Research Corporation of Rutgers University within the context of Input-Output analysis. This model provided an estimate of both the state and national impact of economic changes occurring in Main Street Programs districts. The empirical outcome of such analyses highlighted the possible tangible effects of investment measures in the Main Street districts to a larger economy. This model was adopted to reflect the cumulative effect on the broader economy.

Input-Output Analysis

Input-output analysis (I-O) focuses on the interrelationships of sales and purchases among and between the sectors of the economy. These transactions are documented as an inter-industry transactions matrix. The basic concepts of the analysis dates back to François Quesnay's "Tableau Economique" published in mid Eighteenth century. Leontief's more recent contribution included the important formulation of the first model that connected equation inputs and outputs. This made it possible to calculate both indirect and direct inputs, which provided a familiar input-output model and database (Sohn, ed., 1986).

Earlier regional I-O models required survey-based data that was necessary to built regional I-O tables. This was rather difficult because it required major funding and access to computers, equipment, and manpower to run the systems. Once low cost personal computers became widely available the non-survey, "ready-made" models,

and “do it-yourself” models were introduced to the economic impact analysis arena (Brucker et al., 1987).

ADOTMATR, IMPLAN, RIMS II, SCHAFFER, RSRI were a few of the significant “ready-made” models used to estimate economic impact at the national and regional level. These models were based on the 1977 national I-O tables; however, model flexibility and cost varied (Brucker et al., 1987). The significance of each model and relative performance is beyond the scope of this study. However, a PC I-O model (adopted from the RSRI model) was utilized as the most appropriate candidate due to its capability to estimate economic impacts of the Main Street Program (See both Economic Impacts of Historic Preservation, 1997, & Historic Preservation at Work for the Texas Economy, 1999).

PC I-O Model: This model was unique because of its ability to estimate change vectors in either final demand or output as defined by the users. The model utilized regional purchase coefficients (RPC’S) to adjust the 1977 national I-O technical coefficients of the regions. A regional purchase coefficient is the proportion of a goods or service needed to fill its demands in a region that is supplied by the region to itself rather than being imported from elsewhere (Brucker et al., 1987; Hastings and Brucker, 1993).

The regional I-O model developed by the Regional Science Research Corporation (RSRC) was employed to understand the possible multiplier effects of the economic impact of the Active Main Street Programs. Like most of the input-output models the

PC I-O depends on assumptions and estimations to calculate direct and multiplier (ripple) effects. Both *Economic Impacts of Historic Preservation: New Jersey* and *Historic Preservation at Work for the Texas Economy* explain multiplier effect as:

Direct effect is the initial change in purchases due to a change in economic activity whereas multiplier effect is the system of transactions that followed the initial change in the economy.

Indirect effect is the change directly experienced by the suppliers of the products and services.

Induced effect is the change in consumer spending due to the changes generated in labor income within the region (The Center for Urban Policy Research, 1999 and 1997).

Therefore, dollars spent in the rehabilitation of an historic building facade or the construction of a new building in a Main Street Program community would initiate the first change (direct effect). The purchases of materials, such as brick, concrete, or equipment as a result of these construction activities would be the ripple effect (indirect effect). Whereas, increase in spending by workers and businesses, due to such activities within the district and the city (region), would be the induced effect of such changes observed in the Main Street Program communities.

As stated earlier, *Economic Impacts of Historic Preservation in Texas* published in 1999 by the Regional Science Research Corporation of Rutgers University to assess the economic impacts of historic preservations study was one of the largest of its kind.

Although the particular focus of that research was on historic preservation activity within the State of Texas, the Rutgers study laid the groundwork for the economic impact study for the TMSP. The Rutgers research complemented this study in two ways:

First, it provided a summary of the total economic impact of Main Street Program from the beginning of the program through 1997,

Second, it provided base data for projecting the economic effects of Main Street Program activities for the State and nation (See Appendix E.1 & E.2 State and National Economic Impact Tables by The Center for Urban Policy Research, 1999).

Undertaking this large Texas study, otherwise, would have been extremely difficult within the scope of this research. For purposes of comparability and consistency with this earlier study, the economic impact analysis part of this research was projected from the same base data published in *Historic preservation at work for the Texas economy* (The Center for Urban Policy Research, 1999).

Research Objective 3: Economic Impact within the City

Finally, this study investigates the effects of the economic changes within the active Main Street Districts relative to former Main Street Cities, and non-Main Street cities in Texas in between 1997 and 2001. The number of jobs created, the number of establishments, the number of new sales tax permits, the retail sales volume, and the

commercial property value changes were among the variables used for the systematic comparison.

Assessing the Economic Changes within the Main Street City

Banovetz et al. postulates that most definitions of economic development for small cities involve job creation, business expansion, new-income generation, and tax-base expansion. Cities and counties seek these benefits in exchange for assisting businesses with facility expansions and location services (Banovetz et al. in Kemp, ed., 2000). TMSP cities were no different from most other small cities that were competing in the overall Texas economic market.

Questionnaire results and the reinvestment statistics were assumed to be deterministic to display the parallels between the four-point approach, specifically in design, and the economic changes, such as jobs created and increased private reinvestment within the district. Sustaining the quantitative evidence would be necessary to support both the program's economical indicators in the district and the program's economic impact within the city and the region. Moreover, a systematic investigation of these Main Street cities economies sought to highlight naturally occurring changes in the overall physical, social, and the economical climate of their Main Street city.

First, a systematic review of the State and Federal agencies resources was undertaken to find tangible information that would portray the economic climate of the Main Street district and the city. Obviously jobs created, sales tax revenue and permits, property values, buildings permits, and similar indicators were targeted since these accounted to

be the major components of economic development in small communities (Banovetz et al. in Kemp, ed., 2000). Also, these indicators were usually collected by State and Federal agencies. Several of these indicators were obtained from the Texas State sources. Unfortunately not all the data needed to assess the changes in districts and cities were available due to the confidentiality of such information for a geographical area as small as a few blocks in the Main Street District (this data set is explained in detail in Chapter IV).

These methods used to assess economic changes within the city were outlined in two steps. First, the data regarding the change in jobs created by the active Main Street district from 1997 through 2001 were compared to the change in jobs created in active Main Street city (MSC). Second, active MSC data that were found to be significant regarding economic development, compared to former Main Street cities and non-Main Street cities, were used to make systematic comparisons among all populated places in Texas (US Census 2000 records indicates 1512 populated places in Texas).

Undertaking such a comparative investigation was found particularly helpful in assessing the economic changes of the active MSC programs. First it puts into perspective the activities of the Main Street program district in relation to the Main Street City. Second, it better emphasized the changes in the city in relation to former Main Street cities and non-Main Street cities. Finally, these data allowed the researcher to check the reliability of the data collected and archived by the TMSP.

Chapter IV, Study Area and Data Preparation, utilizes the three objectives and methods

detailed in this chapter. It further addresses the issue of procedures, and data collection methods that is undertaken.

CHAPTER IV

STUDY AREA AND DATA PREPARATION

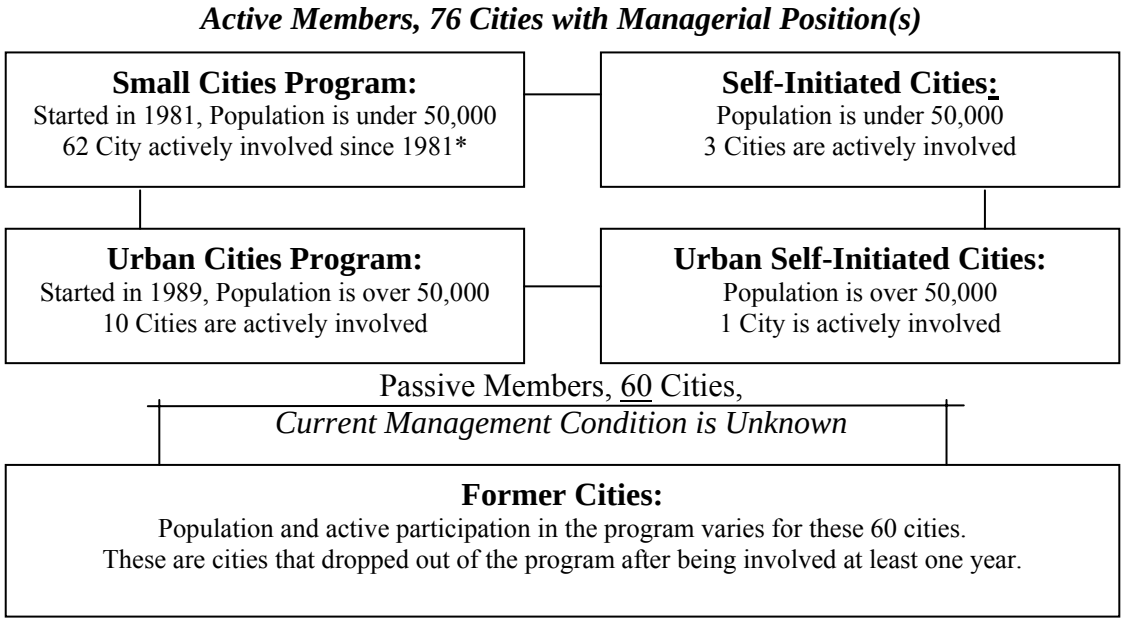
This chapter documents the methods and procedures used by this study. First, the basic characteristics of the study area and the population under investigation are explained. Next, it explains how some of the various instruments such as the questionnaire, Main Street Program archival data, and governmental data have been structured and treated to assess urban design improvements and economic impact. The chapter concludes with an explanation of methods used for data cleaning, validation, integration, and manipulation.

Study Area

The Texas Main Street Program was established in 1981. Between 1981 and 2001 it has served 136 communities (Appendix C.6 through C.9 The lists of the Main Street Program cities in Texas). These included cities with small downtowns such as Whitewright (estimated 2001 population 1747), to large city downtown or neighborhood districts such as Houston with a population of over two million.

Of the 136 program cities 76 fulfilled the systematic requirements of the TMSP, and maintained Active status. As of December 2001 these 76 active city programs was composed of 62 small city programs (population under 50000), 10 urban city programs (population over 50000), three self-initiated small cities, and one urban self-initiated program (Figure 4.1 Population diversification of Main Street cities in Texas).

Several cities that weren't ready to submit a formal application to the program or were undesignated due to the limited number of formal designations available from the program chose to be a Self-Initiated Main Street City. Even though self-initiated cities follow the same Main Street approach and the guidelines as the designated cities, the level of assistance received by those cities is limited.



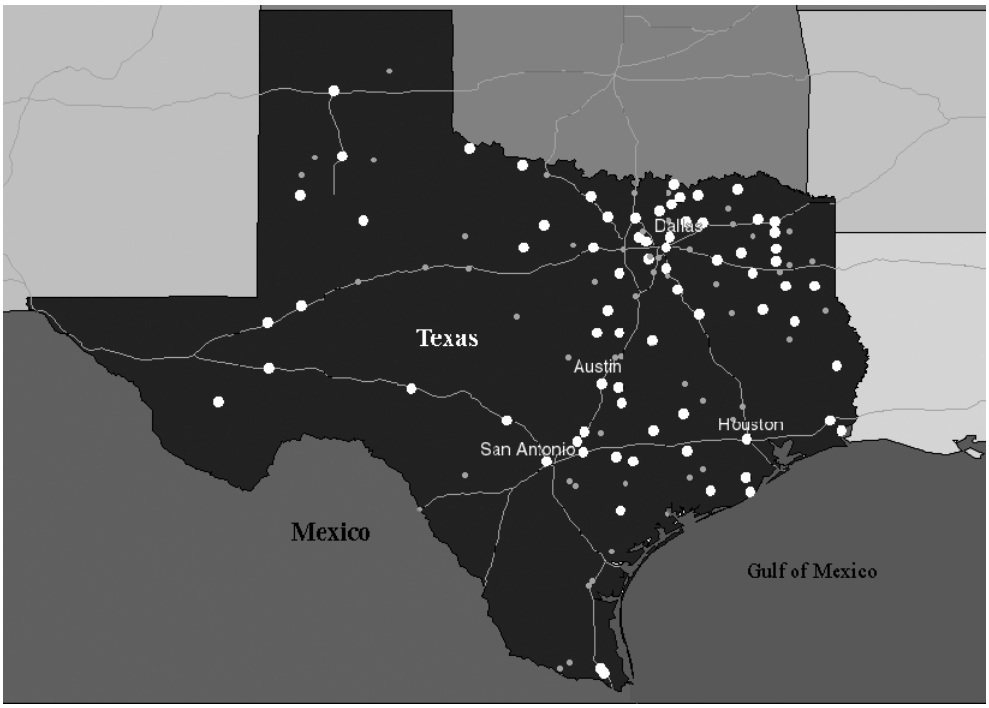
* Two vacant managerial positions for the Small Cities Program, (December, 2001)

** Table is composed from the archival data attained from the TMSP in 2001

Figure 4.1 Population Diversification of Main Street Cities in Texas

Not all of the communities, however, remained actively involved with the program. Sixty such Main Street city programs failed to adhere four-point approach, sustain managerial positions, turn in monthly reports, or send attendees to training sessions and board meetings. These cities were dropped from the program and were considered as former Main Street cities by the TMSP. Baxter, during a phone conversation, pointed out that states like Texas and Oklahoma may have promoted the maximum years of

involvement with the program for five years prior to 1990 (K. B. Baxter, Personal Communication, April 2003). This may have affected the outcome. Even though this is not well defined, the large number of dropouts from the TMSP before 1990 and their current effort to return to the program suggests this claim is true. One thing was clear, after a community left the TMSP neither the conditions of these former programs, nor the reinvestment statistics were reported to the TMSP (Figure 4.2 Geographic locations of Texas Main Street cities).



Small gray circles indicate Former Main Street cities,
Larger white circles indicate active Main Street cities.

Figure 4.2 Geographic Locations of Texas Main Street Cities

To maintain consistent treatment by the TMSP, and to be able to compare similar information from all participating cities, those 60 former Main Street cities and four self-initiated city were excluded from this questionnaire part of the study. Later,

Former Main Street cities were added to the study only to highlight economic changes within the Active Main Street cities. A total of 72 out of 136 Texas Active Main Street cities were chosen for the analyses. For some analyses, the number of cases was less than 72 due to the lack of data in the area being assessed. The number of observations available for the respective instrumentation methods is indicated through out the analyses, and in the result's chapter.

Data Collection

To achieve the defined research objectives and to understand the parallels between urban design improvements and economic changes within the Texas Active Main Street Program cities three different information sources were systematically examined. Qualitative and quantitative data were obtained from Main Street Program Managers Questionnaire responses, Main Street Program databases, and State and Federal data sources. The following sub-sections include a description of each different type of data, its source, and the format in which it was obtained (Figure 4.3 Data Sources).

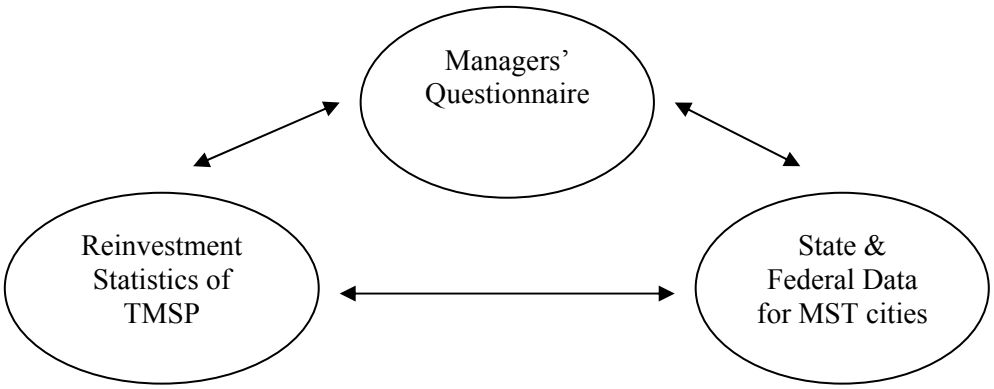


Figure 4.3 Data Sources

Active Main Street Program Managers' Questionnaire

First, permission and support from the Main Street Program in Austin and Texas A&M University was obtained prior to undertaking this study (Appendix C.1 Institutional Review Board Approval). A four-part questionnaire was prepared and the survey was conducted (guided by Babbie, 1990; Dillman, 1978). Active Main Street Managers were asked to indicate changes in components that make up the four-point approach (Appendix C.2 through C.5, Main Street Program Managers' Questionnaire and Cover Letters). The first part of the questionnaire targeted the manager's profile information such as gender and experience. Second part of the questionnaire asked managers to rank design, promotion, organization, and economic restructuring. This was particularly important since one objective was to measure the contribution of the design relative to the other three points of the four-point approach.

The third part of the questionnaire collected data to measure the effects of the four-point approach on any given Active Main Street community. It contained four sub-categories for each four-point approach components. A scale, developed by Rensis Likert (Likert, 1932), was used to capture the respondents' level of agreement or disagreement with statements that express a favorable or unfavorable attitude toward the concept of changes in the Active Main Street cities. A total of sixty Likert-type scale questions covered four sub-categorical areas. The rating, one through five, allowed a response from "significantly decreased" to "significantly increased" to measure changes that occurred after the Main Street Program was initiated in the respective community. In additional, two boxes, "do not know" and "not applicable",

were also provided, so that program managers could respond to questions even if they did not feel confident or the information was unknown. However, these two responses received so little response that this input was statistically insignificant. This further indicated the appropriateness of the questions to the Main Street Managers.

Special attention was given to the design factors in designing the questionnaire since it was the major area of concern. Urban Design Elements & Factors matrices, generated earlier in the literature review, provided a substantial list of variables related to the design issues in the four-point approach (Table 2.1 Design Literature). This later translated into 27 design-related survey questions. Other literature review matrices, provided earlier for promotion, organization, and economic restructuring, listed the major source of issues acknowledged by the researcher and other scholars as important to the respective areas of concern (Table 2.2 Promotion, 2.3 Organization, 2.4 Economic Restructuring Literature). This became the generator of 33 additional questions that addressed the changes in the other three factors of the four-point approach. This served to improve the efficiency of the questionnaire and improve the response rate. The last part of the questionnaire was left open for general comments and other remarks from the Main Street Program managers. In late October 2001, the questionnaire, attached cover letter, and a stamped self-addressed envelope were sent to five random communities, in different population groups, to test the questionnaire and data collection. Three of the responses were returned. As a result of these test run responses, a single question was rephrased and the questionnaire graphically re-formatted to provide ease for the respondents. To achieve a high response rate, an

additional cover letter from the TMSP was included in the questionnaire package. Further, a week before mailing the first set of questionnaires, a Main Street Program Specialist emailed all active Main Street communities alerting them to the questionnaire and its importance. This was particularly significant because of the postal anthrax scare following the events surrounding September 11. The first set of questionnaires was sent to the Texas Active Main Street Program cities in early December. One week later an additional email reminder was sent by the TMSP specialist to each Manager to further emphasize the importance of the questionnaire. A total of 51 communities responded to first survey mailing. A second mailing (follow-up) with rephrased cover letters was sent in the early January 2002 to those communities that had not responded to survey. The Main Street Program specialist sent an additional email reminder one week after the mailing. After this stage nine more responses were received. As a last resort, the researcher tried to contact by phone those communities that had not responded. Some of these communities that were contacted were unable to respond because they were in the process of changing managers. Two additional questionnaire responses were received by late January. Efforts to receive additional responses were halted at this point. A total of 62 of the 78 active communities responded to the questionnaire, a 78.5% response rate. At the time of the survey the membership condition of two cities was unknown. These communities also received questionnaires in addition to 76 active cities listed before (Appendix C.2 through C.5, Main Street Program Managers' Questionnaire and Cover Letters).

Main Street Managers

The Active TMSP city managers were selected as the population for the proposed study. The Main Street Program Manager is the person responsible for the coordination and administration of downtown organization, promotion, and economic redevelopment activities at the local level (See Texas Urban Main Street City Application Guidelines). According to the 2001 Texas Main Street City Application Guidelines every active program has to commit a managerial position for minimum of three years for small cities and five years for urban cities. The managerial position must remain filled after those minimums for the city to remain active in the program. It is preferred that managers have design, architecture, business, historic preservation, public relations, real estate, management, or communication background(s). They are trained and supervised by the National Main Street Center, and the State Program (Texas Main Street Program, 2001).

One of the concerns regarding the Main Street manager as the information provider was that bias might be introduced due to their positions and strong ties to the Main Street program. These positions and program ties were also the managers' strongest assets and allowed them to provide accurate and informative answers to the survey questions. Their openness was extremely important to develop a comprehensive view of the local program and other relevant factors in the community; their knowledge of local conditions was incomparable (See also Smith, 2000).

This researcher took several additional precautions regarding the survey procedures and data analyses before and after conducting the survey. First, the survey was conducted through an academic institution with no ties to the Texas Main Street Program or the National Main Street Center. Second, respondent anonymity was assured in the survey questionnaire cover letter (Appendix C.2 & C.3 Cover Letters). Moreover, the cover letters emphasized that questionnaire responses would be used as a primary tool to improve the effectiveness of the program. These steps served to reduce possible response bias.

After the data collection, the five point Likert scale rating was collapsed to a three-scale rating for reporting purposes. For example, "significant increase" and "increase" were combined. This was done to reduce issues related to the definition of "significant." Asking response to degree of "increase" or "decrease" may raise concerns such what constitutes "significant increase" relative to "increase" or "significant decrease" relative to "decrease" from respondent to a respondent? The responses to this kind of scale may constitute a high risk of bias due to its openness to state opinion rather than facts. Even though the five-part Likert scale was preferred, the three-scale Likert created a usable measure to assess the changes made as a result of the program. Also, qualitative and quantitative economic data was collected to further affirm the findings of the survey.

An extensive literature review also revealed that several Main Street studies used managers as the primary source of information. This further supported the decision of

this research to use the managers as the population unit for this analysis (See Robertson, 2004; Russell Consulting Inc. 2001; Smith, 2000; Baxter, 1996).

Archival Economic Indicators of the Texas Main Street Program

As part of the Main Street approach developed by the National Main Street Center (NMSC) every community was required to compile and submit information regarding its program as part of the application process. Further, regular updates of this information were required of member cities. The schedule for updating this information varied from state to state. Even though the scheduling varied from state to state (monthly, quarterly, semi-annually) compiled information was similar across the State Programs.

The TMSP collected Monthly Reports using a five-part form. The first section of this documentation refers to four-point approach components. The Main Street cities report their accomplishments in design, promotion, organization, and economic restructuring. In the second section, cities note the obstacles that the program encounters. Program status, completed meetings and planned meetings are reported in the third section. The fourth section focuses on the project activities and goals that have set for the coming month. The last section addresses the questions and needs of the cities from the Main Street Program.

The second set of data examines the projects started within the Main Street Districts. This information is gathered by the TMSP in five basic areas: Project status, acquisitions, business starts, business failures, and business rehabilitation. The Project

Status information looks at the proposed, pending, and completed work within the Main Street District. The acquisitions data documents the buying and selling of buildings. The Business Starts data shows new businesses as well as expansion and relocation of existing businesses while Business Failures focuses on businesses that have closed in the Main Street Districts. The final data sets itemize the substantial building improvement projects.

The most important data set gathered by the TMSP was the *Reinvestment Summary* statistics (The Center for Urban Policy Research, 1999). It is critical because of its ability to ascertain the total economic impact of the Main Street Program. It comprises seven categories: Rehabilitation, new construction, buildings sold, public/private joint ventures, public and private sector reinvestments, new businesses, and jobs created. In this monthly report, Main Street managers submit cumulative total number and/or dollar amounts concerning the seven categories listed above since the start of the Main Street Program.

As noted earlier, the submission of the three data sets to the TMSP is mandatory. Not submitting data to the TMSP can cause a community to loose its designation as a Main Street Program city. However, in spite of this, not all of the required data was submitted or accumulated over the years. Especially, the first data set "Monthly Report" qualitative in nature and was not accumulated. On the other hand, most of the second data set (Project Status) in the form of "net gains in business starts, relocation and expansion" and almost all of the Reinvestment Summary data were collected regularly and cumulated over the years by the state program for each program city as

part of its semi-annual report. This was a single complete data set that explained the economic impact of the Main Street District in the Main Street City (Texas Main Street Program, 2002). Following is the list of the variables available from the TMSP:

- Number of Building Rehabilitation Projects,
- Total Expenditures on Rehabilitation Projects,
- Number of Newly Constructed Buildings,
- Total Expenditures on New Construction,
- Number of Buildings Sold,
- Total Expenditures on Buildings Sold,
- Net Business Start ups, Relocations & Expansions (single number, cumulative),
- Net Gains in Jobs Created (gains and losses as single cumulative number),
- Total Reinvestment (named as "total private reinvestment" after June 1998),

Following data started to be added to the semi-annual reports after June, 1998,

- Number of Projects Public/Private Joint Ventures,
- Total Expenditures by Public/Private Joint Ventures,
- Grand Total,
- Volunteer Hours (this was added to semi-annual summary reports starting with June 2002).

Hard copies of these data were obtained from TMSP for the years 1981 through 2001. This study concentrated on the five-year period from 1997 through 2001. This data was entered and tabulated in MS Access and SPSS databases. However, not all the data was used for the analysis. The number of Public/Private venture projects and total

expenditures was a data set that was added to summary at the beginning of June 1998. It corresponded to the middle of the five-year period under investigation. Since the data prior to June 1998 was not available, only its cumulative effect for the year 2001was reported.

Another issue that influenced the reliability of this data was that over time components included in various totals were changed. “Total Reinvestment”, “Total Private Reinvestment” and “Grand Total” were the terms used to define the total benefits of the program over the years. These data sets were as reliable as any other data sets but they required different calculations; this caused confusion. For example, “Total Reinvestment” before June of 1998 didn’t include Public/Private venture total expenditures whereas it did after this date. For these reasons only the term “Total Private Reinvestment” which is the total of: “Rehabilitation projects, New construction, and Building sold total expenditures” was used to calculate the economic impact of the Main Street Program for the five year period.

Economic Changes within the City

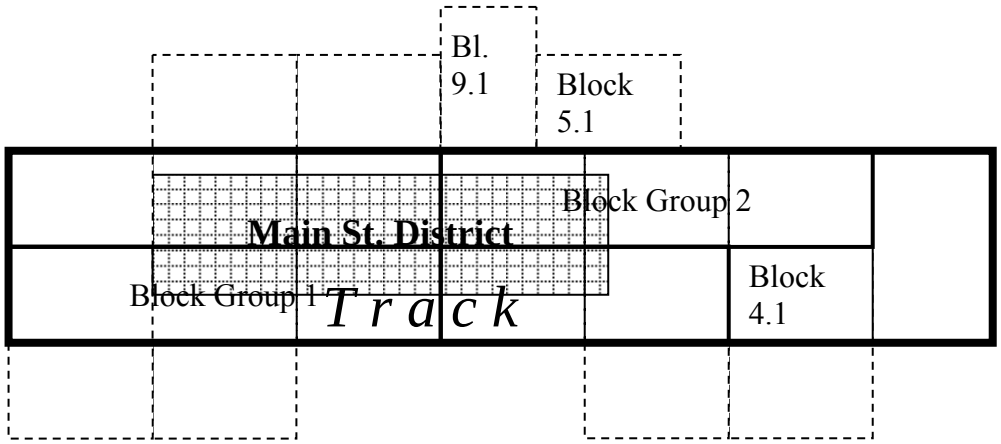
The data gathered both from the questionnaire and the TMSP archives were useful to systematically assess the impact of four-point approach on the revitalization of the Main Street Districts in Texas communities. Yet, as stated earlier, it was unclear at the beginning of this research if those changes occurred because of Main Street Program activities or due to other naturally occurring changes in the overall physical, social, and the economical climate of these cities. It was also uncertain whether or not there were

other sources of information that would support the cumulative effects of "Reinvestment Summary" of the TMSP (Texas Main Street Program, 2002). To answer these questions a comprehensive investigation of State and Federal data was made to search for district level data and city level data for the Main Program cities and non-Main Street cities in Texas.

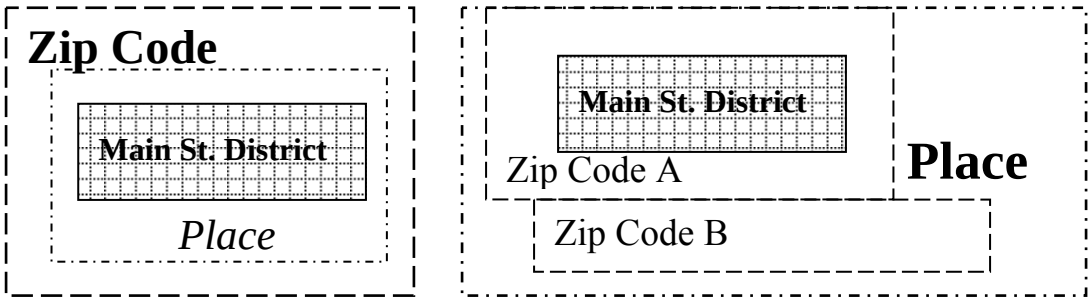
Unfortunately, there were very few open sources of data, other than the Program's "Reinvestment Summary", available for small Main Street Districts. Moreover, these districts borders were usually defined by the applicant city depending on the location of the historical business core. This required investigation of even more detailed geographies data to better capture the effect within the Main Street Districts of Texas.

First, the investigation explored the US Decennial Census data. The Main Street district boundaries were independent of the US Census blocks, block groups, and tracks (See Appendix A.1 Glossary for the definitions) (See Figure 4.4: Coverage relations among several geographic divisions). Moreover, the study targeted a five-year period, 1997 through 2001, to include more active Main Street cities rather than just those covered by the Census. Detailed data would have been estimated from the decennial census data, which would have reduced the reliability of the information. For those interested in socio-economic data based on households, this may have been an acceptable approach. However, this had very little to do with the downtown (central business district) for the given time period. In most cases the majority of the buildings in a historic downtown core were businesses rather than residences. Thus, only the

cumulative population count and population estimates for places were used from the US Decennial Census (See Appendix A.1 Glossary for the definitions).



A. Census Geographic Coverage



B Smaller Cities C. Larger Cities

Figure 4.4 Coverage Configurations Among Several Geographic Divisions

The US Economic Census and County Business patterns were two other possible data sources since this information was collected directly from businesses. At the time of this research the most current data available from the Economic Census was for the year 1997 for geographies as small as place and zip codes, and some summary data for 2002. The complete published data from the 2002 Economic Census will not be

available until late 2006. For this reason, the County Business Patterns, suggested by US Census for small places, data was used for jobs, and number of establishment for all Texas cities.

This data set was particularly useful since it was an annual series and provided sub-national economic data by industry. The series allowed studying the economic activity of small areas; analyzing economic changes over time; and as a benchmark for statistical series, surveys, and databases between economic censuses. The US Census provided the data for analyzing market potential, measuring the effectiveness of sales and advertising programs, setting sales quotas, and developing budgets. Government agencies use the data for administration and planning (US Census, 2003a). Two data sets, employment and establishment, are available from these sources (Table 4.1).

Another possible data resource was the Texas Bureau of Labor statistics. This organization provided two sets of annual employment data that added to the scope of this study: Covered Employment and Wages, and Civilian Labor Force Employment. The Covered Employment and Wages data were obtained from quarterly tax reports submitted to State Employment Security Agencies by employers subject to State unemployment insurance laws and from Federal agencies subject to the Unemployment Compensation for Federal Employees program (Bureau of Labor Statistics, 2003). Unfortunately, this data was aggregated by Metropolitan Statistical area and county level. The Civilian Labor Force Employment data, on the other hand, reflected the number of people employed by place of residence and was reported for several small cities both quarterly and annually. From these data sets the latter was found to be a

useful information source to better define the employment conditions in any given Texas city.

Another resource of State level data was the Texas Comptroller Office for Public Accounts. This resource was particularly helpful; it provided three out of the four data sets that further explain the commercial and retail activity in the Main Street cities. This office supervises and manages the state's fiscal concerns. The Comptroller Office is also responsible for estimating available state revenue and to collect taxes and fees owed to the state Texas. Several data sets are available from this agency: Quarterly sales tax history, annual new sales tax permits, and annual property values. The first set was available from the Texas Comptroller Office Website. The other two, however, required further investigation to obtain the raw data. City retail trade from quarterly sales tax data, the number of new sales tax permits issued, and business commercial property values from property values were extracted for the Main Street cities and non-Main Street cities in Texas (Table 4.1).

Table 4.1 City Comparison Variables

Available Data	Geography	Coverage	Data Sources
Population (household)	Place	1997 to 2001	US Census[1]
Employment – Jobs (employee)	Zip Code	1997 & 2001	County B. Patterns[2]
Establishment (employee)	Zip Code	1997 & 2001	County B. Patterns[2]
Employment (household)	City	1997 & 2001	BLS[3]
City Retail Trade	City	1997 & 2001	COPA[4]
New Sales Tax Permit	City	1997 to 2001	COPA[4]
Property Values (Commercial)	City	1997 & 2001	COPA[4]

[1](US Census, 2003a)

[2](US Census, 2003b)

[3](Bureau of Labor Statistics, Texas, 2003)

[4](Comptroller Office of Public Accounts, Texas, 2003a, 2003b, and 2003c)

The following section explains the data used for assessing the economic changes within the Active MSC in relation to Former Main Street City (MSC) and non-Main Street City (MSC):

Population: The US Census defines population as "all people, male and female, child and adult, living in a given geographic area." Places were one of the smallest populated geographical areas where the estimates of population were available for the years 1997 and 2001. There were 1512 populated places in Texas based on the 2000 US decennial census. This study used population estimates to determine the average growth within the Texas Main Street cities and in non-Main Street cities (US Census, 2003a; Texas State Data Center, 2003).

Employment (Jobs): Paid employment consists of full and part-time employees, including salaried officers and executives of corporations. Included are employees on paid sick leave, holidays, and vacations; not included are proprietors and partners of unincorporated businesses (US Census, 2003b). Total employment (jobs) count for each city was used for the comparative analyses.

Business Establishment: According to the US Census, an establishment is a business or industrial unit at a single location that distributes goods or performs services. Establishment counts represent the number of locations with paid employees any time during the year. Establishment is a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical to a company or enterprise, which may consist of one or more establishments.

When two or more activities are carried on at a single location under a single ownership, all activities generally are grouped together as a single establishment. This series excludes governmental establishments except for liquor establishments, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals (US Census, 2003b).

Employment: In other words, the Civilian Labor Force Employment. This represents the number of people with jobs by place of residence. This data series is more concerned with the count of people working. These figures are updated monthly and are available for statewide, Metropolitan Statistical Areas (MSA), Workforce Development Areas (WDA), and by county and city (Bureau of Labor Statistics, 2003).

Gross Retail Sales: These data were extracted from the sales tax reports for all sectors. The reports include only data from holders of sales tax permits. It was an indicator of the sales made by the retail sector. Businesses that sell only goods that are outside the sales tax base are not covered by these reports. If fewer than four outlets reported in a quarter, the data was omitted as required by state disclosure laws (Comptroller Office of Public Accounts, 2003).

New Sales Tax Permit: These data were extracted from applications for new Texas sales tax permits. Like gross retail sales data, this data was an indicator for only those businesses that were required to pay state sales taxes. This annual data set was grouped by “within” and “outside” the city limits. Cumulative numbers for “within the city limits” used as part of the analyses (Comptroller Office of Public Accounts, 2003b).

Commercial Real Property Values: These data covered land and improvements associated with businesses that provide items for sale or services to the general public such businesses as retail stores, office buildings, restaurants, parking garages and lots, and banks. These are part of the annual property tax report that was prepared by city appraisal districts for the State Comptroller office. It was available for most populated areas in Texas for the period from1997 through 2001 (Comptroller Office of Public Accounts, 2003a).

Sources of Concern and Treatment

Scientific research is not immune to errors inherent in data sets, or procedures and methods employed by any given study. It is critical, however, to account for and report such sources of error to provide reliable methods and objective results. Even though this researcher was cautious in his work, this research had its limitations. Babbie argued in his book *Survey Research Methods* that in the study of social behavior, sampling and generalizability are the greatest problems faced by the researcher (Babbie, 1990). Since this study included a wide scope of all possible cases in the study, the concern for sampling errors and generalizability to the population under investigation was minimal. However, other types of errors may result from both existing and newly collected data, data collection procedures, and analysis methods.

Issues with the questionnaire data: Two types of error may have been generated within this data. One resulted from the validity and reliability of the variables generated to measure the effect of the four-point approach. The other was managerial input; the

managers' level of knowledge and expertise in the subject, managers' possible bias due to their involvement with the program, and technical errors made when filling out the questionnaire.

Several actions, previously argued by Babbie in his book *Survey Research & Methods,* were taken by the author to construct a valid index of variables for the proposed research (Babbie, 1990):

Face validity (logical validity): Items to be included in the index will follow the selection of variables from the design, and the Main Street literature.

Unidimensionality: Each specific variable was intended to measure one dimension of the analyzed indicator.

Since each specific item measures a different aspect of a given variable, each item had equal weight in the index of the Main Street Program Managers Questionnaire. Missing data from the questionnaire responses were omitted from the research.

As explained in the earlier section, several precautions were taken to insure accurate responses from the managers and to reduce such concerns (See the section for the Main Street Managers). This researcher assumed that Main Street Managers were the most knowledgeable people in relation to Main Street Program in the Main Street city and they responded completely and accurately to the issues and questions raised by the research.

Existing Data: A researcher has little control over the tabular data acquired from the Texas Main Street Program, State and Federal Agencies but must be aware of the level of possible errors in the data. All of the data collected during this research effort had limitations and was open to human error.

Validating the data collected from all the archival resources may have been possible for the latest year (2001) covered by the research. However, it would have been very expensive due to the volume of data involved. Thus, faced with economic constraints and time limitations, the study tolerated, or considered negligible, the issue of archival data validity. In every case, incomplete and inaccurate data from all archival resources were omitted from the study.

Survey Research: The broader concern might be whether the survey is sufficiently scientific. This is a theoretical debate outside the scope of this study. However, one must be aware, before utilizing such an approach, that the validity and reliability of a survey as a scientific information resource may be of concern to the scientific community. This author strongly believes that survey research is an appropriate method for this research and further supports Babbies' claim that "Survey research provides an excellent vehicle for the development of useful methods and, by extension fuller understanding" (Babbie, 1990).

PC I-O Model: Input- output modeling focuses on the interrelationships of sales and purchases among the sectors of the economy. The regional input-output model developed by the Regional Science Research Corporation (RSRC) was utilized to

analyze the possible economic impact of the Active Main Street Programs. This model was utilized to predict the overall economic impact of historic preservation in Texas for the year 1997 and for the State and the Nation (See both Economic impacts of historic preservation, 1997 & Historic preservation at work for the Texas economy, 1999). Even though this was one of the most appropriate models available, it was open to errors due to its limitations.

Like most of the input-output models the PC I-O model depended on assumptions and estimations to calculate direct and multiplier (ripple) effects. As stated earlier, a direct effect is the initial change in purchases due to a change in economic activity, where as the multiplier effect is the system of transactions that follow the initial change in the economy.

According to the Economic *Historic preservation at work for the Texas economy* this model was limited because of the assumptions that were made in the following areas (The Center for Urban Policy Research, 1999):

First, the input-output modeling approach assumes that there are no economies of scale to production in an industry; that is the proportion of inputs used in an industry's production process don't change regardless of the level of production.

The needs of each industry's production processes are held constant over time.

Production processes are spatially invariant and are well represented by the nation's average technology. Since Texas is a large region with a diverse economy this assumption was plausible.

One must realize that the main reason behind using the RSRC's PC I-O model in this study was to quantify possible multiplier effects of the initial investment made in the Main Street Program cities. It was adapted to this research mainly to provide support to the primary data sources that were the archival indicators of the TMSP and the State and Federal data of jobs, retail trade, and property values. The significance of this model in this study was to indicate that a project that may take place in a community has more economic benefits than just its direct cost. Consequently, the dollar amounts provided with this model should be taken only as possible estimates of these effects.

Issues with Comparability: Comparability of Main Street Program cities to Non-Main Street Program cities was recognized as a possible source of concern. TMSP cities constituted approximately 10% of the Texas populated places (US Census, 2001) in 2001. Main Street cities all had historically significant downtown districts. A majority was small towns with a population under 50,000, and had similar climates. They were all under the jurisdiction of the State of Texas, had similar taxes at least from the state, and were bound to basic TX DOT treatment. Finally, they were ready to commit to downtown revitalization, and they had at least the necessary funding to deploy the Main Street Program and meet its requirements.

As stated previously, cities also had their differences. They were geographically dispersed across Texas. They faced different socio-economic conditions, and income per capita varied city by city. Morphology of the downtowns and the cities were different; some had a town square, and some had a Main Street on a major street or highway. Some were in close proximity to other cities, metropolitan areas and major

highways, some weren't. They had different heritages, cultures, and daily life styles. They were the small towns and cities of everyday Texas.

This researcher assumed that these factual similarities and differences among all Texas cities, other than commitment to revitalize their downtown by utilizing Main Street Programs' four-point approach, were similar for all the non-Main Street cities as well. For example, similar to TMSP cities, the other 1312 cities in Texas may also have historically significant downtowns. However, many cities in Texas may not have the need nor to be ready to commit their resources to revitalize their downtowns with the help of the Main Street Program (Such as the city of Fredericksburg which is a vibrant city but not part of the TMSP).

This researcher takes the issue of comparison as one-way, from the perspective of the Main Street Program cities. The concern was whether or not the Program contributes to the growth and economy of the participating cities under investigation in comparison to that of non-Main Street cities. This investigator makes no effort to imply any findings or draw conclusions for non-Main Street cities that weren't part of Main Street Program.

Data Consolidation

The origin of the data used in this research varied in format, extent, level of completeness, and validity; however, through the systematic steps outlined in the previous section, a meaningful consolidation was achieved.

Questionnaire data was combined with the Reinvestment Summary statistics of Texas Main Street Program (Texas Main Street Program, 2002). This resulted in one coherent and comprehensive data set for Active Main Street Programs in Texas. Moreover, this data source supported the city data collected for all cities in Texas.

Once such a database was available, it was possible to assess the economic impact of the four-point approach and the study was able to achieve its objectives. The empirical analysis used the numerical data stored in SPSS and Access. The following chapter explains the results of the analysis and the outcome of testing of the objectives set forth in this study.

CHAPTER V

DATA ANALYSIS AND FINDINGS

This chapter presents data analysis procedures and the findings of these analyses. The examination starts with the questionnaire findings related to the profiles of the Main Street managers, and the four-point approach components that are indicators of changes that occurred in the Main Street Program cities. Next, the Texas Main Street Program's Reinvestment Summary data for the five-year period was investigated in order to measure economic changes taking place within the Main Street Districts of Texas. Finally, the State and Federal data regarding the number of jobs, the number of jobs created, the dollar amount of retail sales, the number of new sales tax permit issued, and the property values were analyzed for the same five-year period. The chapter concludes with the summary of the physical changes as related to the economic revitalization of the Main Street Program districts and cities.

Analysis

As explained in the previous chapters, three data sources were investigated to understand the three research objectives posed by this study. First, the profile of Main Street Program managers, managers' rankings of the four-point approach components, and the manager's view of changes in 78 active Main Street Districts in relation to four-point approach components were investigated by means of a questionnaire (Appendix E.5 Main Street Manager's Questionnaire). Second, economic changes

within the 53 active Main Street cities were analyzed for a five-year period, from 1997 through 2001, by reviewing Reinvestment Summary statistics archived by the Texas Main Street Program (TMSP). This evaluation primarily investigated the active Main Street cities that had at least five years of involvement with the program. Finally, the effects of the economic changes within these active Main Street districts were compared to active Main Street Program cities, former Main Street cities, and non-Main Street Program cities in Texas for the same five-year period. The number employed, the number of jobs created, the number of establishments, gross retail sales (taxable amount), number of new sales tax permits issued, and property values were among the variables used for the comparison (Table 5.1).

Table 5.1 Economic Comparison Variables for Texas Cities: 1997 through 2001

Available Data	**Coverage**	**Active MSC**	**Former MSC**	**NON-MSC**
		Data Availability Y= Yes		
Population (household)	Place**	**Y**	**Y**	**Y**
Employment –Jobs (employee)	Zip code	**Y**	**Y**	*
Establishment (employee)	Zip code	**Y**	**Y**	*
Employment (household)	City	**Y**	**Y**	**Y**
New Sales Tax Permit (business)	City	**Y**	**Y**	**Y**
Property Values (commercial)	City	**Y**	**Y**	**Y**
Retail Trade Total (taxable)	City	**Y**	**Y**	**Y**

* Zip Code data not comparable

** A statistical subdivision of a state delineated according to Census Bureau guidelines for the purpose of presenting census data (See Appendix A.1 for glossary of terms)

Findings

Main Street Manager Profiles

Of the 78 cities that received the questionnaire, 62 employed Main Street city program managers: Four self-initiated cities (following the Main Street Program but not selected members), five urban cities, and 53 small cities responded to the survey. This yielded an overall 78.5% response rate. The four cities that were self-initiated were excluded from the findings (See Chapter IV for issues relate to self-initiated cities). The results indicate that 78% of the 58 respondents were female. The average manager had an approximately 45 months of work experience with their current city at the time of the survey.

The primary target group was those member cities that had managers with more than five years of experience. The managers' responses to the questionnaire revealed that 64% of them had at least four years experience in their current position. More over, on average, managers for both small and urban cities (44 cities with a five-year or more involvement with the program) indicated that they had just over 51 months (four years, 3 months) of experience in their current position (Figure 5.1). The average experience of a manager in a city with less than five years participating in the program (14 cities) was 28.5 months. Thus, it appears that Main Street Program managers have a generally sound working knowledge of their cities.

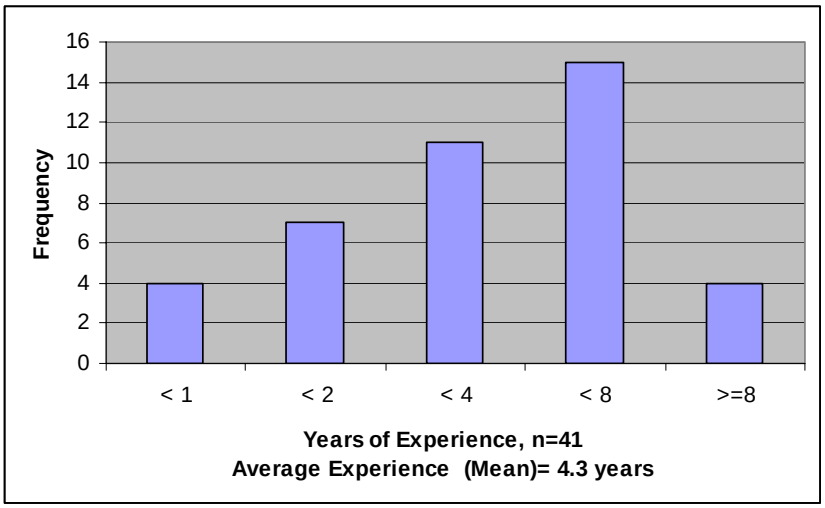


Figure 5.1 Main Street Managers Experience in the Current City

Research Objective 1: Four-point Approach

Ranking of Four-point Approach Components

The respondents were asked to rank design, promotion, organization, and economic restructuring, based on their impacts on the revitalization of the respondents Main Street District. Overall scores of this ranking indicated that each of the four factors had some perceived influence on the Main Street revitalization. There were only small differences encountered in the ranking of the three factors (all but design) in the most significant impact category. However, design was mentioned as the factor by 38.78% of the respondents as the factor that has the most significant impact to Main Street revitalization (Figure 5.2).

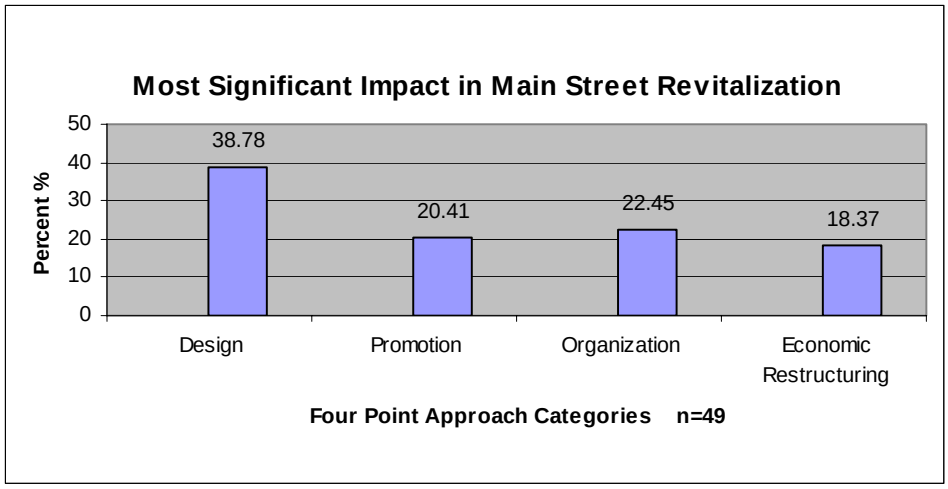


Figure 5.2 The Most Significant Impact Ranking on Main Street Revitalization

On the other hand, the Texas Main Street Program Manager's responses, in the ranking of four-point approach components, varied in the least significant impact category (Figure 5.3). Organization was mentioned by 38.78% of the respondents as the factor that has the least significant impact to Main Street revitalization. The Economic Restructuring factor of the four-point approach was the second least impacting factor on Main Street revitalization. Design and Promotion ranked by less than 19% of the respondents as the factor that has the least significant impact to Main Street revitalization (Figure 5.3).

Due in part to the seemingly varying responses of the Main Street Program managers' to the ranking of the four-point approach above a construct so called "weighted response" created. In order to better explain TMSP manager's responses, values from 1 to 4 were assigned to each ranking (value 1 indicates the least significant impact and value 4 indicated the most significant impact to Main Street revitalization). For

example if a manager ranked design as "1" (indicating the most significant impact), promotion as "2", organization as "3" and economic restructuring "4" the value "4" is assigned to design, the value "3" is assigned to promotion, the value "2" is assigned to organization and the value "1" is assigned to economic restructuring.

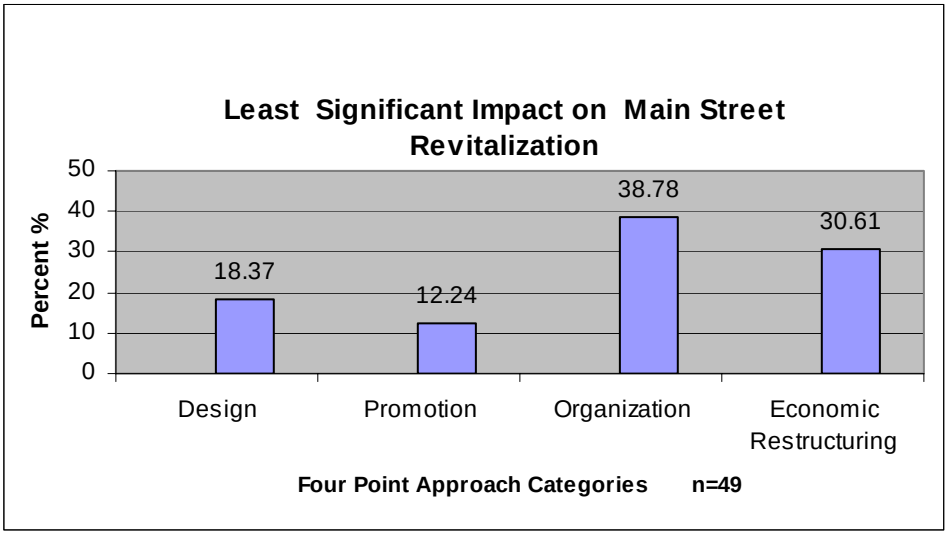


Figure 5.3 The Least Significant Impact Ranking on Main Street Revitalization

The weighted ranking of managers' responses demonstrated that each of the four factors had some perceived influence on the Main Street revitalization (Figure 5.4). The overall weighted ranking of the four factors also indicated that design and promotion ranked slightly higher than the other two factors of the four-point approach. However, the almost equal importance given to all of the four factors clearly supported the literature indicating the importance and the necessity of a comprehensive approach to Main Street revitalization in Texas (Smith, 1996).

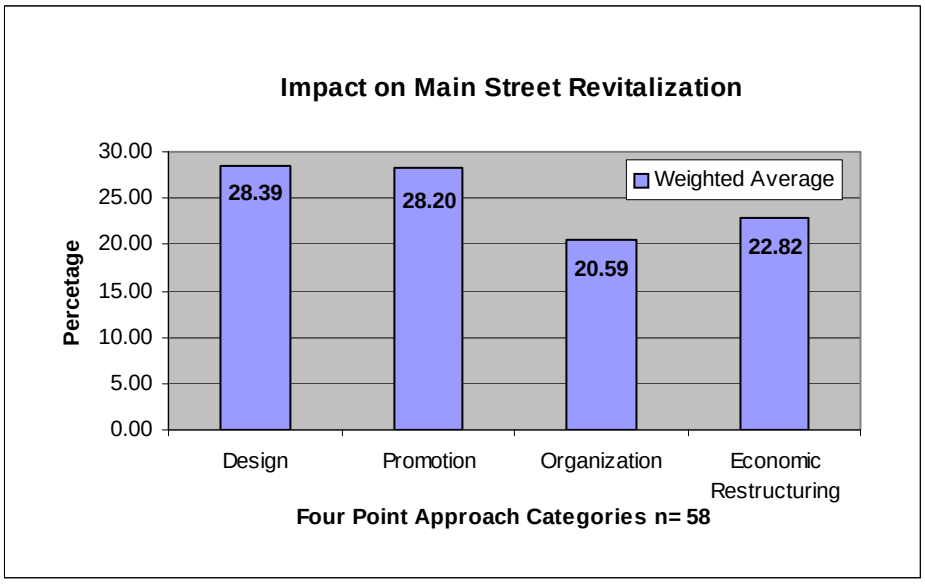


Figure 5.4 The Weighted Ranking of Four-point Approach Components

Changes in the Main Street Districts

After assuring that the Texas Main Street city managers being surveyed had reasonable experience with their cities, and each factor of the four-point approach had some perceived influence in the revitalization process, the focus of the analysis was directed to the third part of the questionnaire. This part was structured to document the changes that occurred within the active Texas Main Street districts after the Main Street Program was started. Of interest was which one(s) of the operationalized indicators of the four-point approach components have shown substantial impact on the Main Street District revitalization.

As indicated in earlier chapters the three scale rating (1 =“decreased”, 2 = “not changed”, and 3 = “increased”) is used to analyze the findings of the questionnaire. A profile of the “average manager” was created for small cities and urban cities.

Obviously this was a construction to provide an overview. The results are presented in the form of descriptive statistics such as percentages and average managers responses.

The results reported in the following tables in this section are listed by (a) the average small city manager response and (b) the average urban city manager response. Average small city manager responses were further divided into three sub-categories so that the length of the experience with the program relative to the changes that occurred can be analyzed and discussed in detail. All of the urban city managers who returned the questionnaire had at least 5 years of experience with the program when the survey was conducted. Thus, all urban cities responded to the questionnaire are included in the following tables.

The analysis particularly focused on the findings of 39 small Main Street cities and five urban Main Street Program cities that had five year or more experience with the program. This was done to capture the physical changes that occurred within the experienced Main Street Program cities (five year and more). This also provided a measure of the economic changes that occurred within those same cities from 1997 through 2002. The findings of the 14 other small cities that have less than five years of experience were also analyzed to better highlight the changes occurring in the more experienced program cities. The changes that occurred relative to the four-point approach factors within the participating cities are summarized below.

Design

First, participants were asked to indicate changes that were observed in 27 design-related indicators that were included in the Main Street Program. As stated in the literature review chapter, these questions were framed to target broader design issues and to minimize the length of the questionnaire.

Among all the design variables assessed by the respondents from all Main Street Program cities (small and urban) with all levels of experience, the number and the quality of renovated or improved storefronts and upper façades mentioned by more than 80% of the respondents as the factor that had changed the most within the Main Street districts (See the Table on page 109). The highest increase indicated by all the respondents in the building and façade quality was not a surprise since the design focus of the program is mainly architectural. These responses also revealed that an increased experience with the program or the sizes of participating cities were not defining factors affecting the number and the quality of building façade related improvements. In other words, all Main Street cities, small or urban, and regardless of the amount of experience displayed a similar amount of change in the buildings facade related improvements (See the Table on page 110).

From the survey, it was surprising that the average manager, in all cities, indicated that the quality of greenery, and accessibility related improvements were of almost equal importance to those changes in the building and façade quality. The detailed analysis of the results, by year of involvement with the program, showed that the changes in the

quality of greenery, and accessibility related improvements seemed to be increasing as the cities remained longer in the program (See the Table on page 110). For example, an average manager in cities that had only one or two year of experience with the program indicated little changes in greenery whereas average managers in cities that had at least three years experience indicated higher increases in greenery related improvements.

Several other design components addressed in the questionnaire were noted by the average Main Street city managers as having changed. More than 60% of the both the small and urban Main Street city managers (five year or more experience cities) reported a substantial increase in the number and the quality of other major streetscape design elements; such as signage, canopies, awnings and shades, street furniture, outdoor seating, lighting, banners and posters, sidewalks, and outdoor displays (See the Table on page 110). Both small and urban city managers' responses seemed to indicate that streetscape improvements increased in the later years of the program. Managers' responses to the questionnaire seemed to indicate that a variety of design improvements had been achieved by the active Main Street cities in Texas.

Obviously, design components such as building facades, canopies, awnings, and signage were frequently treated as architectural and fit with the Historic Preservation Commission's approach of preservation through the renovation of buildings. Yet, findings listed above also revealed that some of the other design components such as greenery, street furniture, and handicap accessibility related equipments or improvements were among the major efforts undertaken. Even though most of these design items were recognized by the program as part of the definition of design (See

for example Smith, 1996, pg.) the guidance provided by the TMSP for such design issues was seemed to be limited. At the time of the research there were only 1.5 equivalent full-time architects assigned to the TMSP in Austin. Most of the design help, other than architectural, was provided to these cities, in their initiation year, by visits of specialized design teams.

Of less significance than the design components mentioned above, such as the street furniture and the greenery, the respondents in both small and urban cities (with at least five years participating) indicated an increase in public displays, street trees, outdoor cafes, restaurants, and food stands. The findings seem to suggest that nearly half of the small Main Street Program cities had gone through changes in the items indicated above. Average respondents in urban programs indicated higher increases in these factors than small city programs. For example, the average Main Street program manager's response for the outdoor display for the small cities was 2.46, where as the response score for the urban cities for the same factor was 2.80. These findings further supported this authors claim that urban cities and small cities have different design concerns (See the Table on page 110).

Since the introduction of the Main Street Program to their cities, the average respondent in both small and urban cities (with five or more years participating) reported an increase in the number and the quality of public open spaces within their Main Street districts. Public space, as defined by the questionnaire included plazas, market areas, and play areas for children. According to average respondent nearly half of the small cities and two thirds of the urban cities added more public spaces to their

Main Street districts. The results seemed to indicate that larger Main Street cities were more concerned with increasing the number of public spaces in their cities for visitors than were the smaller Main Street cities.

The detailed analysis of the results by year of involvement with the program showed that the increase in public space seemed to be larger in small cities that had two or more years of experience with the program than less experienced small city programs (See the Table on page 110).

Most probably as part of the physical improvements efforts listed above, respondents reported an increase in maintenance activities in both small and urban Main Street districts in five-year or older programs (See the Table on page 109). For example, almost 70% of the respondents in the 39 small cities (with five or more years participating) indicated a significant increase in the maintenance activity within their districts. The reported increase of Main Street maintenance activity was slightly higher in urban program cities than small program cities by the managers.

In addition to the questions concerning the physical improvement related design indicators mentioned above, respondents were asked to indicate changes in automobile, bicycle, and pedestrian access-related design improvements in their Main Street districts. Surprisingly, the average small city manager (with five or more years participating) indicated no major changes in the number of traffic lanes, automobile speed regulations, biking related equipment and improvements, or sidewalk width. On

the other hand, the urban Main Street managers indicated more change in access related questions than the small city managers.

As another aspect of the access related issues affecting the Main Street cities, the program managers were asked about the changes in parking related design improvements. These questions focused specifically on the number of on-street, open lot, garage type parking, and parking space within walking distance (600 feet) of the Main Street district (See Gehl, 1996 for the comfortable walking distance). Main Street managers in both small and urban cities (with five or more years participating) indicated the highest increase in the number of parking space within walking distance among parking related issues. Even though access related questions overall received lower scores in comparison to other design improvements made within the Main Street districts, more changes were documented in parking related improvements than the other access related questions listed in the previous paragraph.

The response gap between the average small Main Street city and average urban Main Street city was more distinct in response to access related questions than some of the earlier design questions highlighted above. For each of the questions relating to automobile and accessibility related design improvements, more than 50% of the small city respondents reported no change in their cities. Most of the missing values in the small city responses also came for the questions such as loading zones, transportation stops, garages and parking lots. In addition, the average urban Main Street manager (in five years or older program cities) indicated some increase in attention given to

sidewalk width and parking related issues within the Main Street districts (See Table 5.2).

It seemed that automobile, bicycle, and pedestrian traffic related design indicators are critical for larger cities but not as critical for smaller cities. Considering the 82.1% of the respondents indicate an increase in pedestrians visiting the Main Street Districts in small cities, one could predict that automobile and traffic would be of concern, but more an advantage to small Texas Main Street downtowns. However, these concerns were more of an issue addressed by the urban cities (Table 5.3).

Another finding for further review is the change in level of crime within the Main Street districts. Obviously the change in the level of crime is not necessarily a design issue itself but more the results of the downtown improvements. As reported by the managers of all active program cities, the level of crime within Main Street districts dropped in the program cities. The results also suggested that more experienced cities experienced higher rate of crime reduction within their districts than less experienced cities. Small city managers (from cities that had two years or less experience with the program) indicated no change. Urban city managers indicated the highest percentage of crime reduction than any other category highlighted in the design result review tables below (Table 5.3).

In summary, the average manager in both small and urban cities with at least five years of experience with the program indicated significant design improvements in several design indicators in their cities after becoming affiliated with the program. These cities

also scored higher in most of the design items than the programs cities with less than 5 years experience with the program. Respondents indicated that not all of the design issues addressed in the literature review chapter and in the questionnaire were changed, revealing that the design concerns of the program cities were varied and concentrated heavily on the specific design items. Although there were common areas where both the Main Street managers in a small and in an urban city indicated similar amount of improvements such as upper and street level façade, greenery, street furniture, there were also variations of scores in responses relative to traffic and parking related issues. In all cases, the program managers indicated an increase in people visiting downtown and decline in the level of crime within their district in almost every category of city that was under review (See Appendix D.1 for the manager's responses to design related questions).

Table 5.2 Small Main Street City Summary Results: Design

Active member small cities that started the program prior to 1998, n= 39

Design	Decreased	Not Changed	Increased	NA/DK	Mean*
Renovated and/or improved storefront (street level façade)	2.6	5.1	**92.4**		2.90
Renovated and/or improved building facades (upper façade)	5.2	7.7	**87.2**		2.87
Greenery (other than trees)	5.2	12.8	**82.1**		2.77
Handicap accessibility related equipment & improvements	2.6	17.9	**76.9**	2.6	2.76
Signage	10.2	12.8	**76.9**		2.67
Canopies, awnings, trellises, shades	7.7	15.4	**76.9**		2.69
Street furniture	5.1	20.5	**74.4**		2.69
Streetscape maintenance	5.2	23.1	**69.3**	2.6	2.66
Banners, posters, & advertisements	10.2	23.1	**66.7**		2.56
Outdoor seating	2.6	28.2	**64.1**	5.1	2.65
Lighting	5.2	28.2	**61.6**	5.1	2.64
Sidewalk & pavement quality (color, texture, material)	12.9	25.6	**61.5**		2.49
Outdoor displays (Sculptures, murals, fountains, etc.)	5.2	41	**48.7**	5.1	2.46
Parking space in walkable distance (max. 600 feet)	5.1	48.7	**43.6**	2.6	2.39
Public open spaces (Plazas, market areas, & play areas)	7.7	43.6	**43.6**	5.1	2.38
Street trees	10.3	41	**43.5**	5.1	2.35
Outdoor cafes, restaurants, and food stands	10.3	41	**41.1**	7.7	2.33
On street parking spaces	10.3	51.3	**30.7**	7.7	2.22
Sidewalk width	5.1	66.7	**25.7**	2.6	2.21
Garage and open lot parking space	10.3	53.8	**23.1**	12.8	2.15
Public bathrooms	10.3	64.1	**17.9**	7.7	2.11
Loading zones and transportation stops	2.6	61.5	**17.9**	17.9	2.19
Number of traffic lanes dedicated to automobiles	5.2	79.5	**10.3**	5.1	2.08
Allowed traffic speed	**10.2**	79.5	5.1	5.1	1.95
Bicycle related equipment & improvements	**5.1**	76.9	2.6	15.4	1.97
Number of visitors	2.6	7.7	**82.1**	7.7	2.86
Amount of crime	**48.7**	33.3	2.6	15.4	1.45

* Average Manager mean value do not include “Not Applicable & Do not know” values.

Table 5.3 Average Main Street City Managers Response Summary Results: Design

Design	Small Cities			Urban Cities	All *
	>=5 Year	3-4 Year	1-2 Year	>=5 Year	Missing
N=58	n=39	n=9	n=5	n=5	n=58
Renovated and/or improved storefront (street level façade)	**2.90**	2.89	3.00	2.80	0
Renovated and/or improved building facades (upper façade)	**2.87**	2.89	2.80	3.00	0
Greenery (other than trees)	**2.77**	2.89	2.60	2.80	0
Handicap accessibility related equipment & improvements	**2.76**	2.67	2.40	2.60	1
Canopies, awnings, trellises, shades	**2.69**	2.78	2.60	2.60	0
Street furniture	**2.69**	2.78	2.40	2.60	0
Signage	**2.67**	2.78	2.60	2.80	0
Streetscape maintenance	**2.66**	2.63	2.40	2.80	2
Outdoor seating	**2.65**	2.78	2.25	2.60	2
Lighting	**2.64**	2.75	2.40	2.75	3
Banners, posters, & advertisements	**2.56**	2.56	2.40	2.60	0
Sidewalk & pavement quality (color, texture, material)	**2.49**	2.50	2.20	2.80	1
Outdoor displays (Sculptures, murals, fountains, etc.)	**2.46**	2.38	2.00	2.80	3
Parking space in walkable distance (max. 600 feet)	**2.39**	2.33	2.50	2.60	2
Public open spaces (Plazas, market areas, & play areas)	**2.38**	2.56	2.00	2.60	2
Street trees	**2.35**	2.13	2.20	2.60	3
Outdoor cafes, restaurants, and food stands	**2.33**	2.44	2.40	2.80	3
On street parking spaces	**2.22**	2.33	2.20	2.20	3
Sidewalk width	**2.21**	2.25	2.00	2.60	2
Loading zones and transportation stops	**2.19**	2.17	2.25	2.40	11
Garage and open lot parking space	**2.15**	2.17	2.25	2.40	9
Public bathrooms	**2.11**	2.00	2.00	2.00	4
Number of traffic lanes dedicated to automobiles	**2.08**	2.11	2.00	1.80	2
Bicycle related equipment & improvements	**1.97**	2.00	2.33	2.20	10
Allowed traffic speed	**1.95**	2.13	2.00	2.00	3
Number of visitors	**2.86**	3.00	2.75	2.80	4
Amount of crime	**1.45**	1.63	2.00	1.20	4

* Missing values consist of “Not Applicable”, “Do Not Know”, and no response in average manager tables.

Promotion

Participants were asked questions concerning the changes that may have occurred in their cities regarding the promotion-related aspects of the four-point approach. Managers for all the program cities indicated a significant increase in all seven indicators of promotional activities. Over 80% of the respondents in small cities (five year more experience) indicated an increase in all of the indicators for promotional activities. Similar changes were reported by all the other program cities such as urban cities with five or more years experience with the program, and small cities with less than five years of experience with the program. The respondents gave promotion-related indicators, among the four-point approach factors, the highest increase (See the Table on page 115).

The respondents, in all cities, indicated the highest increases in the area of creating a healthy image, promoting retail goods and services, and promoting historic heritage and the historic buildings in their Main Street districts. As stated earlier, the managers' responses to these questions were similar for all the program cities.

Of all of the small city managers (with five-year or more experience) 84.6% indicated an increase in the number and the variety of special events such as festivals, concerts, and flea markets (See the Table on page 115). This indicated that the program cities not only promoted existing features inherited in their districts but also took actions to generate new activities to revitalize their Main Street districts.

Promotional activities to revitalize the Main Street districts typically appear to have expanded beyond the borders of the Main Street district. According to average manager

in all program cities, activities defining and promoting the position of the Main Street district within the overall market in their respective cities increased by at least 82% (See the Table on page 115).

The promotional activities seem to be occurring in every Main Street Program city. Even though there was little variation in mean scores among the respondents from the small city to large city, or from cities in the first year of the program city to cities with 15 years experience in the program, responses of the managers to promotion related questions were strikingly similar (See the Table on page 116).

In some promotion-related questions managers in younger Main Street cities (two year or less experience with the program) indicated, more increase in changes than the more experienced program cities. Even though this small variation of scores seemed insignificant, this finding illustrated that younger cities, which usually have more enthusiasm for the program, and are on the steep portion of the implementation curve, had more to offer, and more to achieve with promotion-related aspects of the four-point approach (See Appendix D.2 for the manager's responses to promotion related questions).

Organization

The program managers were also asked about 12 organization-related activities that may have taken place within the Main Street districts of Texas. These questions mainly targeted the changes in the representation of the Main Street Program in the Main Street

city as well as the changes that took place in the actions of the stakeholders of the program cities (See the Tables on page 115 and 116).

Managers in all program cities indicated the most significant changes occurred in community participation and support of volunteers in the Main Street events. Respondents in all active Main Street cities also indicated an increase in community representation on advisory boards and committees. Even though it was not as significant, the community support seemed to be little higher in the newer program cities (two years or less) than more experienced small cities (five-year or more). These responses support the earlier literature that emphases the necessity of community involvement in the revitalization process (Burayidi, 2001) (See the Table on page 115).

Another observation relative to the organization category was the increase in committed and dependable funding sources for the private and public activities, and the increase in public-private partnerships. The average manager response in a small Main Street city seemed to support that the Main Street Program appears to clearly provide mutual benefits of all stakeholders in both the public and private sectors (Robertson, 1999).

The respondents from half of the cities indicated an increase in the number of new profit or non-profit organizations within their districts. These results were similar for both small and urban program cities. Not surprisingly, managers in younger small cities, with two years or less program experience, indicated less change than more experienced cities. Even though increasing the number of organizations was a significant step in revitalization, this question received a lower response from managers than most of the

other organization-related questions. It appeared that increasing the number of profit and non-profit organization is one of the less pursued approaches among the Main Street cities for the revitalization of their district (See the Tables on page 115 and 116).

As stated earlier, half of the organization-related questions were directed towards the changes concerned with the representation of the Main Street Program within the each Main Street city. These questions primarily targeted working relationship within and among the design, organization, promotion, and economic restructuring committees established within the program cities. The average manager responses in all cities indicated an increase within and among these communities representing the dynamics of four-point approach within the community. These questions received relatively lower scores from the managers than other organizational-related activities listed above. For example, the level of activity within the organization committee received the lowest increase among all the organization-related questions (Table 5.5).

Surprisingly, managers in more experienced small program city (with five-year or more experience) indicated less change than the average younger small city (less than five-year old program cities) in the working relations of the four-point approach committees mentioned above (Table 5.5). This seemed to suggest that the enthusiasm to revitalize downtown through the committees implemented by the Main Street Program dissipates as the average small city matures in the program (See Appendix D.3 for the manager's responses to organization related questions).

Table 5.4 Small Main Street City Summary Results: Promotion

Promotion	Decreased	Not Changed	Increased	NA/DK	Mean*
Level of activities to create a healthy image		7.7	**89.8**	2.6	2.92
Level of activities to promote the retail goods and services offered by downtown businesses	2.6	7.7	**89.7**		2.87
Level of activities to promote the historic heritage	5.1	10.3	**84.6**		2.79
Number and the variety of special events to promote the Main Street (festivals, concerts, & etc.)	5.1	10.3	**84.6**		2.79
Activities to define & promote the position of the Main Street district within the overall market	5.2	10.3	**82**	2.6	2.79
Level of activities to promote the historic buildings	5.2	15.4	**79.5**		2.74
Number of activities to promote Main Street Revitalization Program	2.6	15.4	**79.5**	2.6	2.79

Active member small cities that started the program prior to 1998, n= 39

Table 5.5 Small Main Street City Summary Results: Organization

Organization	Decreased	Not Changed	Increased	NA/DK	Mean*
Community support by participating in events (and other passive help)	2.6	7.7	**89.7**		2.87
Community support by volunteering (and other active help)	2.6	10.3	**87.1**		2.85
Community representation in an advisory capacity	7.7	10.3	**76.9**	5.1	2.73
Committed & dependable funding sources for the private & public activities	5.2	15.4	**76.9**	2.6	2.74
Public-private partnership	5.1	20.5	**74.4**		2.69
Level of activity within the Promotion Committee	7.7	17.9	**71.8**	2.6	2.66
Level of activity within the Design Committee	12.8	15.4	**69.2**	2.6	2.58
Level of activity within the Economic Restructuring Committee	15.4	15.4	**66.7**	2.6	2.53
Level of activity among the Main Street committees	10.3	20.5	**66.7**	2.6	2.58
Work plan adherence Four Point Approach	17.9	17.9	**64.1**		2.46
Number of new organizations (for profit, or not-for-profit)	5.2	28.2	**59**	7.7	2.58
Level of activity within the Organization Committee	17.9	28.2	**51.3**	2.6	2.34

* Average Manager mean value do not include “Not Applicable & Do not know” values

Table 5.6 Average Main Street City Managers' Response Summary Results: Promotion

Active member small cities that started the program prior to 1998, n= 39

Promotion	Small City			Urban City	All*
	>=5	3-4	1-2	>=5 Year	Missing
	n=39	n=9	n=5	n=5	n=58
Level of activities to create a healthy image	**2.92**	3.00	3.00	3.00	1
Level of activities to promote the retail goods and services offered by downtown businesses	**2.87**	3.00	2.80	2.80	0
Level of activities to promote the historic heritage	**2.79**	2.89	2.80	2.80	0
Number and the variety of special events to promote the Main Street (festivals, concerts, & etc.)	**2.79**	2.78	3.00	3.00	0
Activities to define & promote the position of the Main Street district within the overall market	**2.79**	2.78	3.00	2.80	0
Number of activities to promote Main Street Revitalization Program	**2.79**	2.78	3.00	2.80	1
Level of activities to promote the historic buildings	**2.74**	3.00	2.60	2.80	1

Table 5.7 Average Main Street City Managers' Response Summary Results: Organization

Organization	Small City			Urban City	All*
	>=5 Year	3-4 Year	1-2 Year	>=5 Year	Missing
	n=39	n=9	n=5	n=5	n=58
Community support by participating in events (and other passive help)	**2.87**	3.00	3.00	2.80	0
Community support by volunteering (and other active help)	**2.85**	2.89	3.00	2.80	0
Committed & dependable funding sources for the private & public activities	**2.74**	2.78	2.60	3.00	2
Community representation in an advisory capacity	**2.73**	2.78	2.60	2.60	1
Public-private partnership	**2.69**	2.67	2.80	2.80	1
Level of activity within the Promotion Committee	**2.66**	2.89	3.00	3.00	2
Level of activity among the Main Street committees	**2.58**	2.88	2.80	2.80	3
Level of activity within the Design Committee	**2.58**	2.78	3.00	2.80	0
Number of new organizations (for profit, or not-for-profit)	**2.58**	2.67	2.20	2.40	0
Level of activity within the Economic Restructuring Committee	**2.53**	2.78	2.80	2.60	1
Work plan adherence Four Point Approach	**2.46**	3.00	2.60	2.80	1
Level of activity within the Organization Committee	**2.34**	2.67	2.60	2.60	1

* Missing values consist of "Not Applicable", "Do Not Know", and no response in average manager tables

Research Objective 2: Economic Impact within the District

Economic Restructuring

In the last part of the questionnaire the Main Street managers were asked to indicate the changes observed in 14 economic restructuring-related indicators in their communities. A supporting set of archival data, Texas Main Street Reinvestment Summary Statistics, was obtained from the TMSP (Texas Main Street Program, 2002). The findings from both datasets were analyzed together to better evaluate the changes in the economy of the Main Street districts.

One methodological issue, reiterated here, is the coverage of both datasets under analyses. The Texas Main Street Reinvestment Summary dataset is available for 46 cities out of 53 Main Street Program cities for the five-year period under investigation. Only 44 out 53 Main Street Cities responded to the survey. Since a major objective of the study was to provide an indicator of the economic changes taking place in the Main Street cities' economies, all 46 cities' reinvestment data were included in the calculation of the average city values (Table 5.8).

Archival records of the TMSP revealed that major investments were committed to the rehabilitation of both small and urban Main Street districts during the five-year period under investigation. These records revealed that in the average small program city there were 24.7 rehabilitated buildings, 20.3 project start ups in rehabilitation and expansion, and 2.7 newly constructed buildings that totaled an average of $3.9 million in private

reinvestment per community. In the average urban program city there were 31.7 rehabilitated buildings, 22.7 project start ups in rehabilitation and expansion, and 5.8 new constructed buildings that totaled an average of $14.4 million in private reinvestment per community (Table 5.8).

Table 5.8 Average Active Texas Main Street City Archival Economic Indicators

Five Years Cumulative Average City Reinvestment Summary Statistics*	**Small City**	**Urban City**	**All Cities**
	n=40	**n=6**	**n=46**
Average Length of Experience (year)	10.0	8.5	9.8
Rehabilitation Projects	$1,718,045.8	$5,275,553.2	$2,182,068.5
Buildings Rehabilitated (#)	24.7	31.7	25.6
New Construction	$1,251,666.3	$2,963,833.3	$1,474,992.5
New Constructed Buildings (#)	2.7	5.8	3.1
Buildings Sold	$909,477.4	$6,170,670.0	$1,595,719.9
Buildings Sold (#)	10.3	22.2	11.8
Starts Relocation and Expansion (#)	20.3	22.7	20.6
Net Gains in Jobs Created (#)	65.5	169.3	79.1
Total Private Reinvestment	$3,879,189.5	$14,410,056.5	$5,252,780.8
Ventures Total Expenditures**	$814,877.4	$4,827,079.2	$1,338,208.1
Joint Ventures, number of projects (#)**	6.7	9.7	7.0
Volunteer Hours**	1261.2	1633.8	1309.8
Grand Total**	4,694,066.8	19,237,135.7	6,590,988.9

* 46 Active Main Street Cities that are 5 year of age and older, and have population under 250,000
** These indicators have been available in the archive of TMSP since July 1997

In parallel to the investments listed above, the average Main Street managers, for all Main Street cities, indicated an increase in several economic restructuring related questions within their districts after initiating the program (See the Table on page 123). Program managers for both small and urban city (five-year or more experienced with the program) indicated an increase in all 14 economic activity related questions. Even though it was small, there was a slight variation between small city and urban city

managers' scores. Urban city managers indicated more increase in most of the economic indicators than small city managers. These findings are highlighted below.

Small city managers indicated the highest change in increase in property values, retail sales volume, and in typical ground-floor rental rates within their Main Street district. Whereas, urban city managers indicated the highest increase in ground floor rental rates, and the number of cafes and restaurants within the district (See the Tables on page 123 and 124 for Economic Restructuring). Urban program managers also indicated an increase in ground-floor rental rates with almost an equal score with average small city manager.

Even though the increases in rental rates and property values would seem to inflate real estate prices and could potentially cause pullbacks from the districts, the number of occupants and retail businesses were increased in the Main Street districts. Of the small city managers, 72% indicated an increase in ground-floor occupancy rates and 67% indicated an increase in the number of retail businesses in their district. Furthermore, almost 70% of the respondents pointed out an increase in retail sales in their district after they started the Program. The National Main Street Program estimates that, on average, $39.96 is generated in each community for every dollar used to operate the local Main Street Program (See Main Street Trend Survey, 2001).

Another significant economic activity finding revealed by the study concerned the increases in the economic support provided to commercial and real estate developments, and the long-term development projects and strategies within the Main Street districts.

Managers in both small and urban cities indicated an increase in the number of incentive programs to stimulate commercial development, the number of long-term economic development strategies and projects, and the incentive programs to stimulate real estate development (Table 5.9). It appears that for the last five years efforts by the Main Street Program boosted 7.0 joint venture projects that contributed almost $1.3 million, and created 79.1 net jobs in an average Main Street city (both small and urban city) (Table 5.8). It seemed that these strategies and incentive programs supported the retail development and produced positive economic results for the active Main Street communities in Texas (Table 5.9).

Managers' responses to the change in the number of housing units within the Main Street district were noticeably different between small cities and urban cites (five-year old or older cities). Small city Main Street managers indicated the smallest increase in the number of housing units within their Main Street district among all the economic restructuring-related questions. The small city managers also indicated a lower increase in upper-floor occupancy rates than other economic factors. Urban city managers, on the other hand, indicated a significant increase in both the number of housing units and the upper-floor occupancy rates within the Main Street districts.

Even though small city managers indicated the variety of tenants occupying the buildings as slightly increased, the pace of change was slower for the housing and the upper floor occupancy within their Main Street districts than urban cities. This suggests that small city Main Street districts must explore alternative uses, such as housing, for the upper floors of their buildings.

As a result, managers' responses both to the economic restructuring related questions and the Texas Main Street Reinvestment Summary data revealed that several economic activities have taken place in the active Main Street districts for the period under investigation. Both small cities and urban cities with five years or more experienced with the program seemed to encounter these economic changes in their Main Street districts. The responses of the Main Street managers to design, promotion, and organization related indicators seemed to indicate that these economic activities took place in parallel with the physical and organizational changes in the average Main Street district.

Robertson argues that the importance of building upon and enhancing the functions that are already prevalent to improve downtown vitality (Burayidi, 2001). He also states that the healthiest downtowns are those containing the widest range of activities that serves to attract different types of people. Perhaps, the healthiest downtowns attract the widest range of activities and types of people. Nonetheless, by looking at the evidence alone one can support the four-point approach as contributing to the creation of vital and healthy downtown districts in Texas (See Appendix D.4 for the manager's responses to economic restructuring related questions).

Table 5.9 Main Street City Summary Results: Economic Restructuring

Economy Restructuring	Decreased	Not Changed	Increased	NA/DK	Mean*
Property values within your district		15.4	**79.4**	5.2	2.84
Ground-floor occupancy rate (not vacancy rate)	10.3	12.8	**71.8**	5.1	2.65
Retail sales volume	5.2	7.7	**69.2**	17.9	2.78
Number of retail businesses (not including cafes and restaurants)	12.9	15.4	**69.2**	2.6	2.58
Typical ground-floor rental rates	2.6	25.6	**66.7**	5.1	2.68
Number of cafes and restaurants within your district	7.7	23.1	**64.1**	5.1	2.59
Number of incentive programs to stimulate commercial development	7.7	28.2	**61.6**	2.6	2.55
Upper-floor occupancy rate (not vacancy rate)	5.2	30.8	**56.4**	7.7	2.56
Number of long-term economic development strategies and projects	10.2	33.3	**53.9**	2.6	2.45
Market share of the Main Street district in the overall marketplace of the city		30.8	**51.3**	17.9	2.63
Number of locally owned “mom-and-pop” businesses	7.7	38.5	**48.8**	5.1	2.43
The variety of tenant mix within your district	7.7	43.6	**48.7**		2.41
Number of incentive programs to stimulate real estate development	10.3	38.5	**48.7**	2.6	2.39
Number of housing units	5.2	43.6	**38.4**	12.8	2.38

* Average Manager mean values do not include “Not Applicable & Do not know” values

Active Member Small cities prior to 1998, n = 39

Table 5.10 Average Main Street City Managers Response Summary Results: Economic Restructuring

Economy Restructuring	Small City			Urban City	All*
	>=5 Year	3-4 Year	1-2 Year	>=5 Year	Missing
	n=39	n=9	n=5	n=5	n=58
Property values within your district	**2.84**	2.88	2.60	2.80	3
Retail sales volume	**2.78**	2.63	3.00	2.75	11
Typical ground-floor rental rates	**2.68**	2.50	2.20	3.00	4
Ground-floor occupancy rate (not vacancy rate)	**2.65**	3.00	2.60	2.80	4
Market share of the Main Street district in the overall marketplace of the city	**2.63**	2.71	3.00	2.75	11
Number of cafes and restaurants within your district	**2.59**	2.44	2.00	3.00	2
Number of retail businesses (not including cafes and restaurants)	**2.58**	2.67	2.80	2.40	1
Upper-floor occupancy rate (not vacancy rate)	**2.56**	2.29	2.50	2.75	7
Number of incentive programs to stimulate commercial development	**2.55**	2.56	2.80	2.60	2
Number of long-term economic development strategies and projects	**2.45**	2.44	2.80	2.75	2
Number of locally owned “mom-and-pop” businesses	**2.43**	2.78	2.40	2.80	2
The variety of tenant mix within your district	**2.41**	2.75	2.50	2.60	2
Number of incentive programs to stimulate real estate development	**2.39**	2.44	2.60	2.75	2
Number of housing units	**2.38**	2.14	2.25	2.80	8

* Missing values consist of “Not Applicable”, “Do Not Know”, and no response in average manager tables

All Active Member Cities, n = 58

The Ripple Effect of the Economic Activity within the District on a Larger Geographic Area

The analysis of both the questionnaire and the Texas Main Street Reinvestment Summary statistics supported the assertion that the four-point approach produced several beneficial economic results for Main Street districts throughout Texas. Yet, how this may translate to the economy of the respective city, region, and the nation remained unclear.

The direct and indirect effects of Main Street Program on a broader geographical area, using the Texas Main Street Reinvestment Summary dataset, were investigated using the Regional Input-Output analysis model called PC I-O Model of Regional Science Research Corporation (RSRC). As stated in the earlier chapters this model provided a projection of both state and national impact of economic changes occurring in TMSP districts in between 1981-1997 (See Appendix E.1 & E.2). The data presented in the tables below were projected from the base data of this earlier study (The Center for Urban Policy Research, 1999). The empirical outcome of the projection is believed to demonstrate the possible tangible effects of investment made within the Main Street districts to a larger economy.

The PC I-O model illustrates the cumulative Reinvestment Summary statistics' effect on a broader economic region for the five-year period under investigation. The reason being, not to estimate a precise numerical economic impact figure (this is not the scope of this study), but rather to demonstrate with a widely used simple projection method

how a small investment, within the context of economic impact literature, may benefit a larger region.

The results presented earlier (See Table 5.8) demonstrated that between 1997 and 2001 the effort of Texas Main Street program's efforts cumulatively resulted in $4.7 million investment in an average small city and $19.2 million investment in an average urban city (Table 5.8). To make an accurate projection, two preliminary steps were taken: First, the Real Estate sales (buildings sold) were excluded because this activity doesn't have a multiplier effect to catalyze a round of economic transitions (The Center for Urban Policy Research, 1999). Second, the numbers were adjusted for inflation to better capture the effect in 2001 dollars (Table 5.11).

Table 5.11 Texas Active Average Main Street Program City Five Year Net Investment

Active Small City (n=40)		**Active Urban City (n=6)**	
Component:	**2001 dollars***	**Component:**	**2001 dollars***
Rehabilitation	$1,651,385.62	Rehabilitation	$5,070,861.74
New Construction	$1,203,101.65	New Construction	$2,848,836.57
Joint Ventures	$783,260.16	Joint Ventures	$4,639,788.53
Subtotal	$3,637,747.43	Subtotal	$12,559,486.83
Jobs	62.96	Jobs	162.73
Jobs ($47,000)**	$2,959,054.20	Jobs ($47,000)**	$7,648,310.00
Total Output	**$6,596,802**	Total Output	**$20,207,797**
Buildings Sold***	$874,189.68	Buildings Sold***	$5,931,248.00

* GDP Adjusted, **Reference:** Samuel H. Williamson, "What is the Relative Value?" Economic History Services, April 2002, URL: http://www.eh.net/hmit/compare/

** Net Jobs Equal (1 FTE Estimated Equal to $47000). Reference: Economic Impact Study 1999

***Building Sold values not added to cumulative investment number due in part it doesn't have multiplier effects as other investments

Using the multipliers from the earlier literature, the total economic impact, including both direct and multiplier effects, the average small Main Street city investment included a in-state gain of roughly 164 jobs, $3.8 million in income, $5.9 million in gross domestic product, and $0.6 million total of local and state taxes for the five years (Table 5.12). The average urban Main Street city investment included an in-state gain of roughly 503 jobs, $11.7 million in income, $18.4 million in gross domestic product, and almost $3 million of local and state taxes for the same five years. The total gains (in-state and national) of the investment produced by the average city programs (both urban and small city) almost twice that of the state numbers (See National figures in Table 5.12).

Table 5.12 The Economic Impact of Initial Expenditure Made in an Average Active Main Street City

	Average Small City*			**Average Urban City***		
	Total Output: $6,596,801.63**			Total Output: $20,207,796.83**		
	In-State	**National**	**Total (U.S.)**	**In-State**	**National**	**Total (U.S.)**
Jobs (person)	164	119	283	503	364	867
Income($)	$3,830,222	$3,882,350	$7,712,571	$11,733,011	$11,892,693	$23,625,703
GDP/GSP($)	$5,999,349	$5,653,281	$11,652,630	$18,377,637	$17,317,536	$35,695,174
State ($)	$339,227	$372,020	$711,247	$1,039,146	$1,139,598	$2,178,744
Local ($)	$333,231	$1,984,709	$1,984,709	$1,984,709	$1,984,709	$1,984,709

* The data is projected from earlier multipliers calculated for MST (See Appendix E.1 & E.2)

** GDP Adjusted, **Reference:** Samuel H. Williamson, "What is the Relative Value?" Economic History Services, April 2002, URL: http://www.eh.net/hmit/compare/

The projection of the cumulative investment made within the Main Street districts demonstrated that the rehabilitation of buildings, the construction of new buildings, initiation of joint venture projects, and the creation of jobs within the Main Street districts for the five year period, from 1997 through 2001, resulted in a large effect on

the broader economy, the state and the nation. These findings suggest that economic activity within the districts most probably were reflected on the Main Street cities economies.

Research Objective 3: Economic Impact within the City

The aggregated results of the Main Street managers' questionnaire documented the changes occurring in the active Main Street cities relative to the four-point approach components. Both the analyses of the Texas Main Street Program's Reinvestment Summary statistical data and the questionnaire results for economic restructuring questions revealed the contribution of the Main Street Program to the revitalization of the Main Street districts in Texas communities. The PC I-O Model demonstrated how the likelihood of new investments in a Main Street district might impact a city and state. This model also provided a projected figure of the impact, on both state and nation, resulting from economic changes occurring in Main Street Programs districts. Yet, the Texas Main Street Program's claim for success in the Texas Main Street districts (McKnight, 2002) remained within the limitations of the program resources.

As explained earlier, a review of the state and federal archival data revealed several additional sources that explain the nature and duration of economic activity within Texas cities. Since the improvement of historic buildings to enhance business activity and promote job creation is a major economic restructuring effort undertaken by the TMSP, the number employed, the number of jobs, the number of establishment, the new sales tax permits issued, the retail sales volume, and the commercial property values findings

for the Texas cities were reviewed. This part of the analysis gave a clearer understanding of the condition of an average Main Street city (MSC) in the overall economic climate of the State.

The average active MSC was compared to the average former MSC (the cities that dropped out of the program), and in some cases to the average non-MSC (all populated cities other than the Main Street Program cities) in Texas for the same five-year period (1997-2001). This was done, not only to display economic changes occurring in the active Main Street cities, but also to compare those to other similar size cities in Texas and to give a better frame of reference regarding what took place in the active Main Street cities of Texas. The findings were reviewed in six sub-population categories to better capture the effect of the program.

Population

Analysis of the US Census population data estimates gathered for the 53 active MSC indicates that the average active small MSC population increased slightly, 0.5% growth rate for the five-year period under investigation (US Census, 2003a; Texas State Data Center, 2003). During the same period, an average former MSC grew at a 3.9% rate and the state of Texas population rate change was 2.5% (Real Estate Center, 2003) (See Table 5.13). The population of the average active MSC stayed fairly stable whereas there was an increase in the number of people living in the average former MSC for the period from 1997 through 2001.

Table 5.13 Average Texas City Comparison Tables 1997 through 2001

Available Data*	**Coverage**	**Unit**	**Active MSC**		**Former MSC**		**Non-MSC**	
			n	Change	n	Change	n	Change
Population (household)	Place	%	50	**0.49**%	54	**3.91**%	1512	**2.49**%**
Employment –Jobs (employee)	Zip code	%	50	**4.51**%	40	**2.61**%		***
Establishment (employee)	Zip code	%	53	**1.09**%	40	**- 2.48**%		***
Employment (household)	City	%	40	**3.94**%	34	**4.56**%	191	**6.54**%
New Sales Tax Permit (business)	City	#	53	**524.32**	40	**406.66**	516	**412.43**
Property Values (commercial)	City	%	51	**29.81**%	39	**22.78**%	340	**30.26**%
Retail Trade Total (taxable)	City	$	53	**1.4 billion**	40	**1.2 billion**	169	**1 billion**

* Over 200% change in any variable for any given city excluded from the comparisons

** State of Texas (Including Active and Former Main Street Cities)

*** Zip Code data not comparable

Employment and Jobs

As stated earlier, two sets of employment records were obtained for the Texas cities and zip codes: Civilian Labor force data based on households (called "Employment" in this research) for the cities of Texas, and employment data based on employee records (called "Jobs" in this research) for the zip codes of Texas. Even though the employment data was a less reliable set for this study, both were included in the results due to their unique role in explaining the employment conditions of all Main Street cities in Texas.

There were three important limitations in the use of the employment data in comparison to the jobs data: First, the employment data was available for the city not for the zip code. In most cases it represented a larger geography than zip code data (See Chapter IV for the detailed explanations of geographical coverage of the city and the zip code). Second, employment data was based on the number of people with jobs by place of residence as oppose to workplace within the city. Third, out of the 53 active Main Street

cities that qualified for the comparison, employment data was obtainable for only 40 cities, whereas the jobs data was available for 50 cities of 53 qualified for this study. Employment data set was also small for the former Main Street cities (See Table 5.14).

Table 5.14 Civilian Labor Force Employment for Texas Cities: 1997 through 2001

Population	Active MSC		Former MSC		Non-MSC	
	n	Change %	n	Change %	n	Change %
2001 to 5000	5	**2.71**	2	**5.02**	26	**3.83**
5001 to 10000	8	**- 2.51**	3	**1.08**	52	**6.57**
10001 to 20000	7	**3.02**	15	**3.29**	50	**5.25**
20001 to 30000	9	**5.70**	6	**4.56**	16	**9.05**
30001 to 50000	5	**12.25**	1*	**15.74**	21	**7.45**
50001 to 250000	6	**5.06**	7	**7.05**	26	**9.36**
All cities	40	**3.94**	34	**4.56**	191	**6.54**

*City of Conroe is an atypical Texas City to present a category due to heavy economic activity surrounding the city (Such as factory outlets, and tourism industry) and the close proximity to major Highway (I 45).

Source: Bureau of Labor Statistics, 2003

With these restrictions in mind, the analysis of the employment data, based on households, demonstrated an increase of employment for all Texas cities for the period from 1997 through 2001. However, the five-year average rate of increases in employment in both an average non-MSC and average former MSC were slightly higher than the rise in employment rate in the average active MSC. This analysis also revealed that both the average active MSC and the average former MSC had a lesser amount of increase in employment than average non-MSC in Texas (Table 5.14).

On the contrary, the average rate of increase in the active MSC jobs for all cities, based on employee numbers, was slightly higher than the former MSC jobs for the same five-year period (Table 5.13). A spatial breakdown of jobs data, with respect to the size of the

cities, showed that the average rate of increase in jobs for the smaller active cities (population under 10,000) was higher than the average former Main Street cities in the same population category (Table 5.15).

The analysis of the jobs data showed that there was a decline in the number of jobs in the average active MSC in the 10,001 to 20,000-population category. A detailed look at this group presented that two particularly active Main Street cities in this population category displayed a very low performance as oppose to other six active cities in the same category. Visiting one of the towns in this group revealed that the central business district had shifted from the Main Street district. This is perhaps part of the reason why this town has not shown the kind of increase in the number of jobs similar to the other active Main Street cities in the same category. Although there were increases in the number of jobs for both average active MSC and former MSC in 20,001-30,000-population category, average former MSC in this category have shown a relatively higher increase in the number jobs than active MSC (Figure 5.5).

The increase in the number of jobs in average former MSC in 50,001 and above population category was higher than for the average active MSC. Although urban Main Street programs are not a major concern to this analysis (See Chapter IV about the issues surrounding urban Main Street cities), the difference in this category can be attributed to the high level of economic activity taking place in a single former MSC. The city of Edinburgh is believed to skew the results in the 50,001 to 250,000-population category due to its unique geographic location on the border.

Table 5.15 Jobs Created in Texas Cities: 1997 through 2001

Population	Active MSC		Former MSC	
	n	Change %	n	Change %
2001 to 5000	10	**2.76**	5	**0.72**
5001 to 10000	13	**5.30**	7	**1.73**
10001 to 20000	8	**- 4.88**	14	**1.16**
20001 to 30000	7	**1.31**	6	**4.25**
30001 to 50000	5	**26.06**	1**	**- 21.47**
50001 to 250000	7	**3.48**	7	**9.76**
All cities	50	**4.51**	40	**2.61**

*These numbers are based on Zip Codes of Main Street Districts. This data is not comparable with non-Main Street cities due to its complexities.

**Conroe is atypical Texas City to present a category due to heavy economic activity surrounding the city (Such as factory outlets, and tourism industry) and the close proximity to major Highway (I 45).

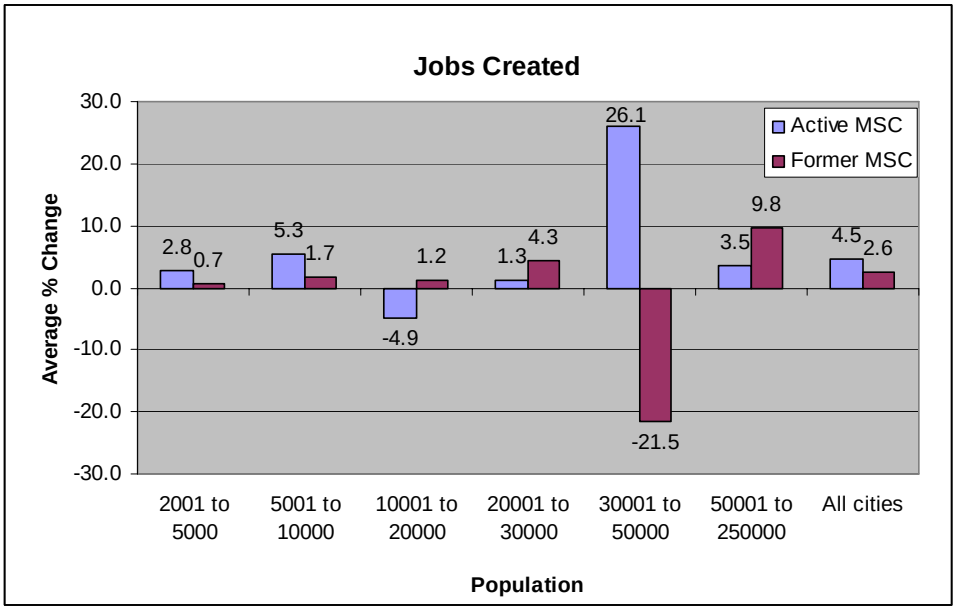


Figure 5.5 Jobs Created in Texas Cities: 1997 through 2001

The increase in jobs, based on employee numbers, for the average active MSC was quite strong in the 30,000 to 50,000-population category. Although sample size was quite small for the former Main Street cities to make a rigorous comparison there was a higher

rate of increase in jobs in the 30,001 to 50,000-population category in the average active MSC than the former MSC in the same population category (Table 5.15).

The analysis of the jobs (by employee) data demonstrated that a substantial amount of economic activity had taken place in an average active MSC in Texas between 1997 and 2001. Even though average former MSC in Texas has seen some increase in the number of jobs, overall there was a higher rate of increase in the percent of jobs created in an average active MSC than in an average former MSC. The employment (by household) data did not support this finding; however, the higher rate of increase in employment in the former Main Street cities and non-Main Street cities could be explained by the higher rate of increase in population for those cities (Tables 5.13 and 5.14). Also, people who live in a house within the city limits may not be working within the city limits. For example, there are more jobs generating industry surrounding the city of Conroe (former MSC in 30,001-50,000-population category) than within the city limits.

Business Establishments

Overall, in the period 1997 through 2001, there was a slight increase in the number of establishments in the active Main Street cities as opposed to slight decline in the number of establishments in the former Main Street cities in Texas (Table 5.16). Spatial breakdown of the establishment data by city size illustrated that the higher rate of increase in the number of establishments occurred in the small active Main Street cities (population under 50,000) relative to former Main Street cities in the same population category. The analysis also revealed that the number of establishments in both the active

urban city and the former urban city declined in this period (population above 50,000). The rate of decline in the average active urban city was slightly more than the average rate of decline of a former urban city.

The detailed analyses of the establishment data further illustrated that the average rate of increase in the number of establishments in the average active Main Street cities for both 2001 to 5000 and 5001 to 10,000-population categories were significantly higher than the average former Main Street cities for the same population categories. This pattern of a higher rate of increase in the number of establishment within the average active MSC as oppose to former MSC also occurred in the 30,000-50,000 people population category (See Figure 5.6 and Table 5.16).

Even though the rate of increase in the number of establishments in active MSC was relatively small (1.09%) the average active MSC has more increase in the number of establishments than average former MSC between the 1997 and 2001. Average active MSC has done better in almost all the population categories under 50,000 except for almost equal performance in the 10,001 to 20,000-population category than average former MSC in the same population categories. This finding seemed to suggest that the number of businesses increased in the cities that have been actively involved with the program rather than the ones that dropped out from the Main Street program (Figure 5.6 and Table 5.16).

Table 5.16 The Number of Business Establishments within the Texas Cities: 1997 through 2001

Population	Active MSC		Former MSC	
	n	Change %*	n	Change %*
2001 to 5000	13	**+ 4.70**	5	**- 8.81**
5001 to 10000	13	**- 0.30**	7	**- 3.17**
10001 to 20000	8	**- 2.79**	14	**- 2.66**
20001 to 30000	7	**+ 0.17**	6	**- 0.65**
30001 to 50000	5	**+ 8.77**	1	**- 0.50**
50001 to 250000	7	**- 3.15**	7	**- 0.65**
All cities	53	**1.09**	40	**- 2.48**

*These numbers are based on Zip Codes of Main Street Districts. This data is not comparable with non-Main Street cities due to its complexities.

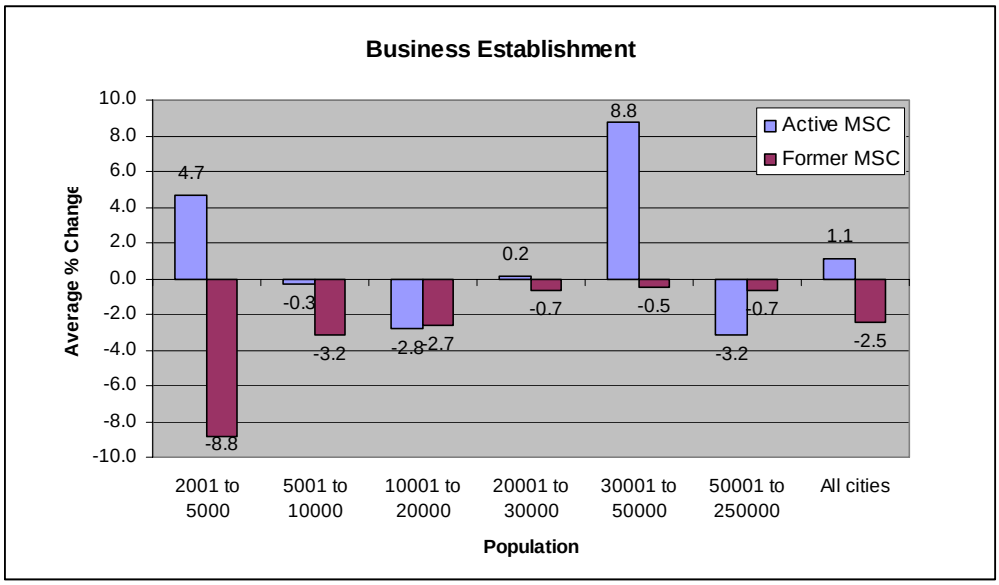


Figure 5.6 The Number of Business Establishments in Texas Cities: 1997 through 2001

New Sales Tax Permits

The analysis of the new sales tax permits revealed that the number of permits issued in an average active MSC was significantly higher than the number of new sales tax permits issued in an average former MSC, or in an average non-MSC for the same five-

year period (Tables 5.13 and 5.17). Between 1997 and 2001 an average active MSC issued 524 new sales tax permits whereas an average former MSC issued 406 sales tax permits and an average non-MSC issued 414 sales tax permits (Tables 5.13 and 5.17).

A spatial breakdown of the new sales tax permit data showed that the number of permits issued in an average active MSC was higher than the average former MSC, or the average non-MSC permits number in every population category (Table 5.17). The spatial data also revealed that the total number of new sales tax permit issued in the active Main Street cities, population 10,000 people or less, was substantially higher than the former Main Street cities in the same population range. The total number of new sales tax permit issued in the average active MSC in 30,001 to 50,000-population category was also quite high as opposed to average former MSC and average non-MSC in the same population category (Figure 5.7).

The spatial breakdown of the data also showed that the total number of new sales tax permit issued in the average former MSC was relatively lower than the average non-MSC in every population category.

The number of new sales tax permits issued in the active Main Street cities seemed to indicate that there was more entrepreneurship in the active Main Street cities than in former Main Street cities and non-Main Street cities. This finding also seemed similar (if not stronger) to the rate of increase in the number of establishments, indicating a significant amount of economic activity was produced in the average active MSC between 1997 and 2001. Conversely, the analysis of the new sales tax permit data also

suggested that former Main Street cities fell short in creating entrepreneurship activity as oppose to active MSC and non-MSC within the same time period (Figure 5.7 and Table 5.17).

Table 5.17 The New Sales Tax Permits Issued in Texas Cities: 1997 through 2001

Population	Active MSC*		Former MSC*		Non-MSC*	
	n	# of permit	n	# of permit	n	# of permit
2001 to 5000	13	**72.85**	5	**45.59**	300	**50.56**
5001 to 10000	13	**110.46**	6	**95.14**	102	**97.81**
10001 to 20000	7	**225.14**	15	**194.18**	52	**197.79**
20001 to 30000	9	**369.89**	6	**261.65**	16	**266.73**
30001 to 50000	5	**699.60**	1	**502.55**	22	**504.55**
50001 to 250000	7	**1668.00**	7	**1340.88**	24	**1357.13**
All cities	54	**524.32**	40	**406.66**	516	**412.43**

*Within the city limits

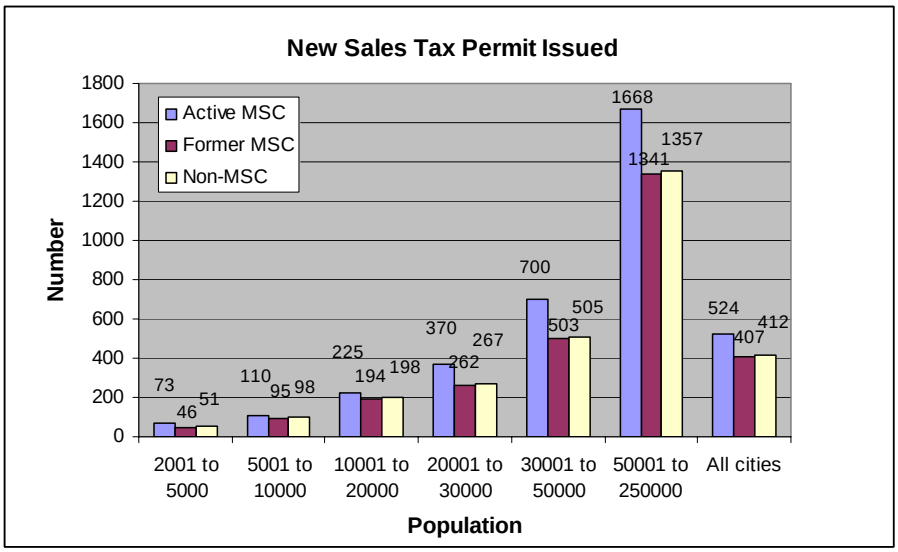


Figure 5.7 The New Sales Tax Permits Issued in Texas Cities: 1997 through 2001

City Retail Trade (Subject to Sales Tax)

The data relative to city retail trade was found to be particularly useful because it provided an actual dollar amount for the retail activities taking place in Texas cities for the five-year period under investigation. The total retail sales data (subject to state tax) was used as a measure to analyze how much retail activity had taken place within the active Main Street cities as oppose to former Main Street cities and non-Main Street cities. The taxable amount was the focus in these analyses because it clearly illustrated the change in the sales tax revenue as well as demonstrating the change in total retail sales generated in any given Texas cities.

As indicated in the earlier summary table (Table 5.13) the five-year total dollar amount of retail sales (taxable) for an average active MSC was higher than the average former Main Street city and the average non-MSC. To be more precise, between the 1997 and 2001 an average active MSC generated approximately $8.3 million worth of retail sales (taxable) whereas an average former MSC generated $7.4 million and an average non-MSC generated $5.9 taxable retail sales in Texas (Table 5.17).

Spatial breakdown of the data further demonstrated that the amount of retail sales (taxable) in an average active MSC, with few exceptions, was considerably higher in comparison to average former MSC and non-MSC in sub population categories (See both Table 5.17 & Figure 5.8).

The detailed analyses of the retail sales data further illustrated that the retail sales in an average active MSC was clearly higher than the average former MSC in every

population category except in the 30,001to 50,000 population category (Table 5.18). This exception seems to be an expected one since the city of Conroe is an atypical Texas former MSC. The reason for that was the heavy economic activity surrounding the city (such as factory outlets, and tourism industry) and its proximity to major Highway (I45).

The total dollar amount of retail sales generated in an average active MSC was also slightly higher than the average non-MSC in every population category except in the 5001 to 10,000 population category (Table 5.18). The higher increase in retail sales in average active MSC as oppose to non-MSC was evident, particularly in the 2001 to 5000-population category, and in the 30,001 to 50,000-population category.

It is noteworthy that the difference in total retail sales in three average city types was relatively distinct among all population categories. For example, an average active MSC (2001to 5000 population category) had almost doubled the retail sales of an average non-MSC and was almost one third more than the retail sales of the average former MSC.

Similar to the findings of both the number of establishment data and the number of new sales tax permit data the total dollar amount of retail sales data indicate that there was more economic activity in the active Main Street cities than in former Main Street cities and non-Main Street cities. This finding seemed to suggest that the economic activity generated in the active Main Street cities not only initiated a new entrepreneurship but also it generated higher retails sales and increased sales tax revenues between 1997 and 2001 (Tables 5.17 and 5.18).

Table 5.18 An Average Texas City Retail Trade (taxable): 1997 through 2001

Population	Active MSC		Former MSC		Non-MSC	
	n	*Retail sales ($)	n	*Retail sales ($)	n	*Retail sales ($)
2001 to 5000	13	**107,345,192**	5	**85,834,352**	24	**60,090,579**
5001 to 10000	12	**236,889,207**	6	**179,770,761**	46	**290,453,943**
10001 to 20000	8	**615,498,235**	15	**528,373,147**	43	**432,105,865**
20001 to 30000	8	**888,862,336**	6	**730,413,164**	13	**769,164,414**
30001 to 50000	5	**2,108,751,534**	1	****3,016,140,186**	18	**861,280,039**
50001 to 250000	7	**4,331,197,509**	7	**2,892,653,896**	25	**3,514,110,441**
All cities	53	**1,381,424,002**	40	**1,238,864,251**	169	**987,867,547**

* These numbers calculated from city annual total amount of retail sales subject to state tax
**Conroe is atypical Texas City to present a category due to heavy economic activity surrounding the city (Such as factory outlets, and tourism industry) and the close proximity to major Highway (I 45).

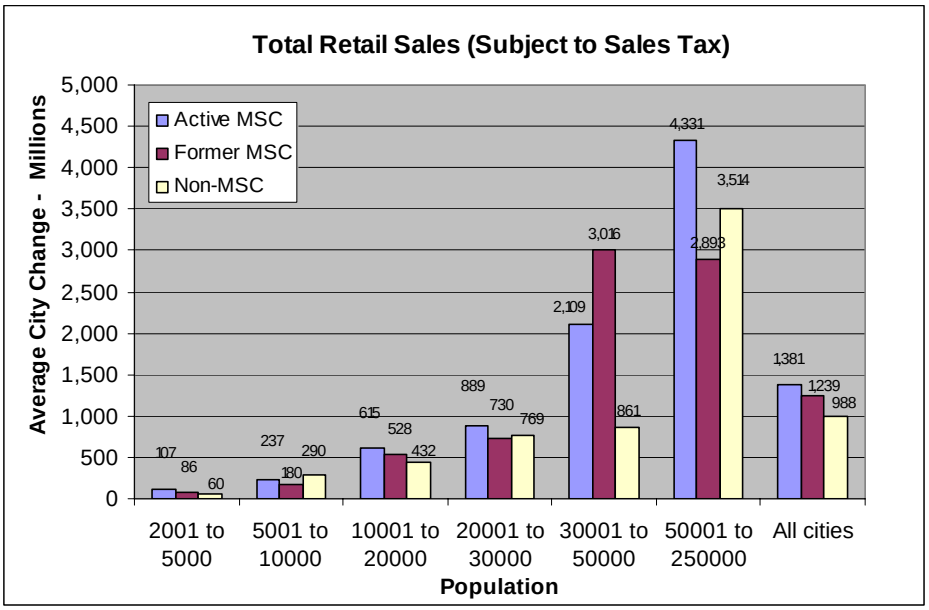


Figure 5.8 An Average Texas City Retail Trade (taxable): 1997 through 2001

Commercial Property Values

The analysis of the property value data displayed a positive rate of increase in the commercial property values for all Texas cities (active, former, and non-Main Street

cities) from 1997 to 2001 (Figure 5.9). While the commercial property values in an average active MSC were slightly lower than the average non-MSC, both active and non-MSC commercial property values were significantly higher than the average former MSC commercial property values (Table 5.13).

Spatial breakdown of the property data further demonstrated that the increase in commercial property values appeared to be in the active Main Street cities (population under 50,000) as compared to former Main Street cities in the same population group (Table 5.19).

The higher increase in commercial property values in average active MSC as opposed to average former MSC was particularly distinct in three sub-population categories. These categories were: 2001 to 5000, 5001 to 10,000, and 30,001 to 50,000. The commercial property values in these categories in the average active MSC almost doubled the increase in commercial property values in the average former MSC for the period between 1997 and 2001.

The commercial property values in the average active MSC, in every population category, were slightly less than the average non-MSC except in the 2001to 5000 and in the 30,001 to 50,000 population categories. The average rate of increase in commercial property values in the average MSC in 2001 to 5000 population category was 27% whereas the rate of increase 20% in the average non-MSC in the same category. The average rate of increase in commercial property values in the average MSC in 30,001 to

50000 population category was 57%, whereas the rate of increase 53% in the average non-MSC in the same category.

Table 5.19 Commercial Property Values in an Average Texas City: 1997 through 2001

Population	Active MSC		Former MSC		Non-MSC	
	n	Change %	n	Change %	n	Change %
2001 to 5000	13	**27.53**	5	**14.82**	172	**20.57**
5001 to 10000	11	**21.49**	6	**14.72**	80	**28.37**
10001 to 20000	6	**24.19**	15	**18.40**	40	**26.53**
20001 to 30000	9	**29.82**	6	**25.73**	12	**49.11**
30001 to 50000	5	**57.01**	1	**37.68***	16	**53.01**
50001 to 250000	7	**32.47**	6/7	**41.65**	20	**38.78**
All cities	51	**29.81**	39	**22.78**	340	**30.26**

*Conroe is atypical Texas city to present a category due to heavy economic activity surrounding the city (Such as factory outlets, and tourism industry) and the close proximity to major Highway (I 45).

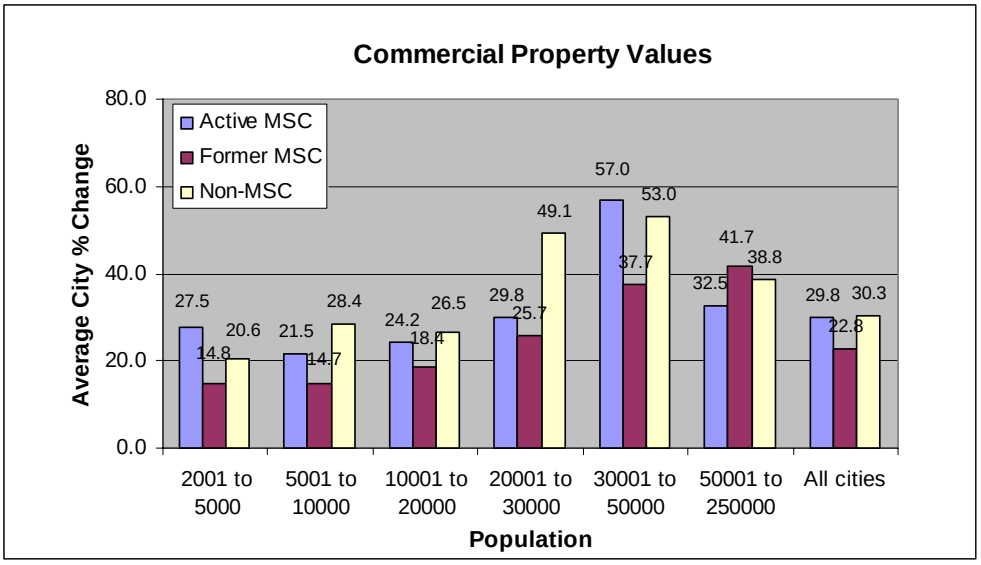


Figure 5.9 Commercial Property Values in an Average Texas City: 1997 through 2001

Most probably as a result of the various physical and economic changes taking place within the active Main Street cities, such as the increase in the number of establishments

and the new sales tax permits issued, the commercial property values were also increased in the active Main Street cities from 1997 to 2001 (Table 5.19). The higher increase in the commercial property values within active Main Street cities seemed to indicate that there was more demand for commercial property in these cities than the demand for commercial properties in former Main Street cities. These finding also seemed to suggest that the demand for commercial property values in the active Main Street cities were as high as the demand for the non-Main Street cities for the period between 1997 and 2001.

Summary Findings

With respect to the research objectives put forth and analysis of the study data, the findings of this study are:

Research Objective 1: Four-point Approach

This study clearly indicated that several positive changes occurred in design, promotion, organization, and economic restructuring components of the four-point approach within the average active Texas MSC (particular in those cities with at least five years with the program and with population under 250,000 people). Among the factors in the four-point approach, design seemed to have the most important impact on the revitalization of the Main Street districts. However, not all of the design improvement variables recorded in the literature seemed to play the same role in the revitalization of Main Street districts in Texas. According to the Main Street managers the majority of the design improvements have taken place in the upper façade and lower façade (storefront) of the Main Street

buildings and to the greenery and handicap accessibility related equipment and improvements of the Main Street.

Research Objective 2: Economic Impact within the District

This study indicated that several economic activities took place within the active Main Street districts of Texas in the period 1997 through 2001 (particularly in cities with at least five years in the program and with population under 250,000 people). These activities resulted in creating jobs and generating private reinvestment through building rehabilitation, new building construction, and joint venture projects within the active Main Street districts. By the ripple effect, these initial economic activities generated additional economic activities within the state and in the nation.

Research Objective 3: Economic Impact within the City

The study examined the employment, the number of jobs, the number of establishments, the number of new sales tax permits, the amount of retail sales, and the commercial property values for Texas cities for the same five-year period. These findings compared the three categories of cities: those active in the Texas Main Street Program (TMSP); those formerly active but now inactive; and those who have not participated. Other than the smaller increase in the number of employment by household in active TMSP as oppose to former TMSP and non-Main Street Program cities the results indicate that several positive economic activities took place within the active Main Street cities as oppose to former Main Street Program cities and non-Main Street Program cities in

Texas. Overall, the number of jobs, the number of business establishments, the number of new sales tax permits, the amount of taxable retail sales, and the commercial property values were higher in the active TMSP cities than the former TMSP cities. Among the four comparable variables with the non-Main Street Program cities, the number of new sales tax permits issued and the amount of retail sales were higher in the active TMSP cities than the non-Main Street Program cities and the commercial property values in active TMSP cities were almost equal to non-Main Street Program cities in Texas (with the exception of employment data based on household).

The results indicate that the Main Street Program, part of which is urban design oriented, is having a positive effect on economic activity within the active Main Street cities for the five-year period under investigation.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The final chapter of this dissertation draws together the emergent themes in the dissertation, derived conclusions, and makes recommendations for further study. To do so, it discusses the analytical findings in relation to the objectives of the study, and the methods deployed. The research conclusions are discussed in the context of practical and theoretical urban design. Like any research, this one is not without any limitations. The limitations of the study are also reiterated so that they can be addressed within the larger context of urban design. Finally, this chapter ends with reflections on possible avenues for continued analysis and future research.

Summary

Purpose of the Study

This research explores the relationship between urban design and economy. Specifically, it investigates and analyzes the linkages between urban design and the economic activity in the 78 active Main Street Program cities in Texas. The effect of design, promotion, organization, and economic restructuring components of Main Street Program's comprehensive four-point approach to each individual active Main Street district are investigated. The economic changes in those districts are assessed to further evaluate the Program's economic contribution to Main Street district for the period from 1997 through 2001. Finally, the employment, the number of jobs, the number of

establishments, the number of sales tax permits, the retail sales dollars, and commercial property values are compared among three categories of cities: those active in the Texas Main Street Program (TMSP); those formerly active but are now inactive; and those that have not participated in the program in the study period.

Background

The US downtowns have undergone countless rehabilitations, revitalizations, and renewal efforts for over half a century to erase the negative effect of spreading transportation arteries, urban sprawl, and suburbanization. The Main Street Project, one of the products of the Historic Preservation Act, was authorized by the National Trust for Historic Preservation in 1976. The Main Street Program, rooted from the three pilot communities of the Main Street project, started nationally in the 1980's. The program emphasized the use of the preservation and rehabilitation of historic commercial buildings to revitalize, otherwise neglected Main Street districts in towns as small as 1000 in Central Business Districts to city's as big as 4 million people. In almost 25 years of operation following the Main Street Approach, the program reached over 1600 communities in 45 states in the US and Canada. The TMSP, the largest of all the state programs, reached over 147 communities since 1981.

Arguably, as a result of the Main Street Program's four-point approach, both the National Main Street Center and the TMSP report an economic rebound of historic downtowns and neighborhood commercial districts of the participating cities (McKnight, 2002; Smith, 2002). Yet, there is little empirical evidence (Robertson, 2004) in the

literature whether or not the efforts of the program, through design, promotion, organization, and economic restructuring, actually revitalize these districts, and if so which components of the Main Street approach create these positive effects.

Similar concerns were also embedded in to the broader questions in the literature that explores the relationship in between design improvements and economic changes (Carmona in Macmillian, ed., 2004; Carmona et al., 2001, 2002a, and 2002b; Eppli and Tu, 1999; Oppewal and Timmermans, 1999; Bookout et al., 1994; Vandell and Lane, 1989).

Research Design and Methodology

To better understand the parallels between urban design improvements and economic changes taking place within the Main Street Program districts, all active Texas program cities (78 cities) were targeted by this research. Three data sets were examined to assess the changes in four-point approach components, and in the economy within the Main Street Program cities (See Literature review tables; Tables 2.1, 2.2, 2.3, 2.4, & 2.5 in Chapter II).

The first data set was obtained using a questionnaire distributed to 78 Texas Main Street Program (TMSP) city managers who were responsible for the coordination and administration of the downtown organization, promotion, and economic redevelopment activities on the local level (See Texas Main Street City Application Guidelines, 2001). The managers were asked to respond to a four-part questionnaire, which consisted of the indicators ranking the relative impact of the four-point approach factors and the

indicators of changes that may be seen in 60 four-point approach related factors (Appendix C.5 The Main Street Manager's Questionnaire). The last part of the survey was left for the Main Street managers' comments. Sixty-two of the program managers in four self-initiated cities, five urban program cities, and 53 small program cities responded to the survey. This yielded a 78.5% overall response rate. The four self-initiated cities (the cities that follow the Main Street Program without officially participating in the program) were excluded from the findings.

The second data set, private reinvestment and jobs created within the Main Street districts (See *Reinvestment Summary,* Texas Main Street Program, 2002), was obtained from the TMSP archives in Austin. These data were gathered for each active MSC for the period from December 1997 through December 2001 to analyze the five-year economic activity patterns in the respective Main Street districts.

These two data sets were used to assess the impact of the four-point approach on the revitalization of the Main Street districts in Texas communities. Yet, they presented a limited view for explaining the economic activity within the Main Street cities. It was also uncertain whether or not there were external data sources that would support the cumulative effects of Reinvestment Summary statistics of the TMSP.

The third data set, that measures the economic activity within the Texas cities, was abstracted from the State and Federal data for the same five-year period. The primary search was conducted for district-level data for the Main Street Program cities in Texas. Unfortunately, there were few data sources, other than the program's Reinvestment

Summary statistics available for the Main Street districts in Texas. Moreover, the boundaries of these districts were usually defined by the participating city, depending on the location of the historical business core, conventional spatial definitions such as zip codes, or blocks, and thus were not a precise match for comparison.

At this stage of the research several government agencies archives were searched for appropriate economic data for the Main Street districts and the cities. Three data sets were applicable to the majority of Texas cities, and were useful for explaining the economic changes that took place in the Texas cities between 1997 and 2001. These were: (1) The population estimates for the places in Texas from the US Decennial Census data, and the number employed and number of establishments for Texas cities from the County Business patterns data collected by the US Census Bureau, (2) The Civilian Labor Force Employment data sets of the Texas Bureau of Labor statistics, and (3) Annual new sales tax permits, the city retail sales, annual property values data sets of the Texas Comptroller Office for Public Accounts. These data sets were analyzed separately under three main categories: Active program cities, former Main Street cities, and non-Main Street cities, in order to compare economic activities taking place in these cities for the five-year period under investigation.

The Scope of the Research

The three primary objectives set for this research are listed below:

Research Objective 1: Four-point Approach

The study identifies and evaluates the variables that makeup the design, promotion, organization, and economic restructuring components of the four-point approach. Special emphasis is given to design.

Research Objective 2: Economic Impact within the District

In addition, the research focuses on the economic changes that occurred within the Main Street District for the cities running the program for at least five years.

Research Objective 3: Economic Impact within the City

Finally, the study compares the effects of the economic activity within the active Main Street Program cities to former Main Street Program cities and non-Main Street Program cities in Texas for the same time period.

Data Analysis

Basic frequency and probability calculations were performed to measure changes in urban design and economy in Main Street Districts of Texas. Several statistical analytical methods are reviewed and where necessary case studies were run to test the research objectives. Due to the large number of cases relative to the number of variables under investigation, the comfort level for meticulous statistical analysis was low. For this reason, findings were reported in the forms of descriptive statistics, tables, and

graphics to provide empirical evidence of the parallels between the urban design intervention and economic revitalization.

Summary of Findings

First, the assessment of the four-point approach components and the economic changes within the districts are summarized to assess changes taking place in the Main Street districts. Next, the Reinvestment Summary data (gathered in raw form from the Main Street Program archives) were summarized for the active Main Street cities. Finally the research focused on the changes that occurred within the Main Street cities in comparison to former Main Street cities and non-Main Street cities in Texas.

Summary of the Questionnaire Results

Survey respondents, who had at least 45 months of work experience in their current city, ranked design, promotion, organization, and economic restructuring, based on their impact on the revitalization of the respondent's Main Street district. The managers' ranking of four point-approach components showed that each of the four factors had some perceived influence on the Main Street revitalization. The rank of importance given to each factor of the four-point approach varied from Main Street manager to manager (Figure 5.2). While there was little difference encountered in the overall ranking of the four-point approach components, design and promotion ranked slightly higher than the organization and economic restructuring. The almost equal significance given to each of the four factors in the ranking clearly supports the necessity of a

comprehensive approach to downtown and Main Street revitalization in Texas (Figure 5.2) (Smith et al., 1996).

Four-point Approach Components

A primary concern, addressed by the questionnaire, was to assess "which of the operationalized indicators of the four-point approach components have substantial impact on Main Street District revitalization?" Only 44 active Texas Main Street cities (39 small cities and 5 urban cities) responses are included in these analyses because these cities had a minimum of five years experience with the program at the time this survey was conducted. Likert scale scores from a 1 to 3 ("decreased" "not changed" "increased") were assigned to each indicator to measure those changes that took place in active Main Street districts. The following section elaborates the findings on the four-point approach for the participating cities.

Design: The participants were asked to indicate changes observed in 27 design-related indicators in their district that took place after their cities were included in to the Main Street program. In summary, the average manager in both small and urban cities, with five or more years of experience with the program, indicated significant improvement in several designs. The questionnaire results revealed an increase in the number and quality of improved buildings facades, canopies, awnings, and signage within the average Main Street district of Texas. These items were frequently treated as architectural and fit with the Historic Preservation Commission's agenda for the preservation of buildings through renovation. Findings also revealed that the streetscape improvements recognized by the

program as part of the Main Street definition of design (See Smith et al., 1996) (yet the observed guidance provided by the TMSP for such design issues was limited), were also a significant part of the design improvements that occurred in the average active Main Street district. Further analysis of the responses in design category variables revealed that different sizes of cities had different design improvement focuses for their districts. For example, the average small city manager indicated no major changes in the traffic and parking-related issues within the Main Street district. Where as the average urban Main Street manager indicated some increase in attention given to issues such as sidewalk width and parking. The average manager's response to design category questions clearly indicates that several physical changes have taken place in the active Main Street cities of Texas (See Appendix D.1 for the manager's responses to design related questions).

Promotion: Participants were asked a number of questions concerning the changes that took place in their districts after they introduced the promotion related components of the four-point approach. The Main Street Program Managers indicated a significant increase in most of the indicators of the promotional activities that took place in their district. The respondents indicated that the most significant outcomes were achieved in creating a healthy image, promoting retail goods and services, and promoting the historic heritage of the historic buildings in their Main Street districts (See Appendix D.2 for the manager's responses to promotion related questions).

Organization: The Main Street Program managers were also asked several organization related questions. The respondents indicated that the biggest increase occurred in

community participation and volunteer support for the Main Street events. Another observation, made by the managers in the organization category, was the increase in committed and dependable funding sources for the private and public activities, and the increase in public-private partnerships. The results further indicated that the Main Street Program inspires social and organizational changes within the Main Street districts of Texas (See Appendix D.3 for the manager's responses to organization related questions).

Economic Restructuring: The Main Street managers were asked to indicate changes observed in 14 economy-related indicators in their district that took place after their cities were included in the Main Street program. The Main Street managers indicated an overall increase in property values, typical ground-floor rental rates, occupancy rates, and the number of retail business in their Main Street districts. Respondents also indicated increases in the economic support provided to commercial and real estate developments and the development projects and strategies within the Main Street districts. It seemed that several new economic activities took place in the Main Street districts. The responses of the Main Street managers regarding design, promotion, and organization related indicators demonstrated that a variety of economic activities took place in parallel with the physical and organizational changes in the average active Main Street district of Texas. The program had the effect of channeling both public and private investment to the application areas (See Appendix D.3 for the manager's responses to economic restructuring related questions).

Another noted finding, outside the scope of this study, showed that several changes also occurred in relation to four-point approach components in those active Main Street

Program cities with less than five years of experience with the program. Indeed, there were 14 active Main Street city (MSC) managers who responded in this manner to the questionnaire. The findings from this data revealed that physical (design) and economy related changes started to take effect slowly whereas promotion and organization related activities started promptly within the first years after program initiation.

Reinvestment Made within the District

The new reinvestment, based on the Reinvestment Summary dataset of the Texas Main Street Program (TMSP), showed major expenditures for the rehabilitation of Main Street districts for the given five-year period. These data revealed that in the average active MSC (of 40 small and 6 urban active Main Street cities) there were 25.6 rehabilitated buildings, 20.6 project start ups in rehabilitation and expansion, and almost 3.1 newly constructed buildings at the time this research was conducted. These totaled an average of $5.3 million in private reinvestment per community for the five-year period under investigation. In addition, the average active Texas Main Street district had 7.0 joint venture projects of over $1.3 million and 79.1 net jobs created for the five-year period under review (See Table 5.8 for the Reinvestment Summary statistics of Texas Main Street cities). The Reinvestment Summary statistical datasets summarized above also supported the assertion that the four-point approach produced several economic outcomes that were beneficial to Main Street districts and their respective cities throughout Texas.

The Ripple Effect of Economic Activity within the District

The effect of the economic impact within the district on the economy of the respective city, region, and the nation was determined using the Regional Input-Output analysis model called PC I-O Model of Regional Science Research Corporation (RSRC). An earlier model developed for the TMSP was adopted to demonstrate the possible tangible effects of investment made within the Main Street districts on a larger economy (The Center for Urban Policy Research, 1999). The rational behind adopting this model was to demonstrate with a widely used projection method to what extent a local investment could benefit a larger region or economy. In other words, the model can highlight the economic outcomes of the urban design activity outside the immediate locale. Estimating a precise numerical economic impact figure was outside the scope of this study.

The average active MSC (including both small and urban city Main Street programs) investment included an in-state gain of 333 jobs, $7.8 million in income, $12.2 million in gross domestic product, and $1.8 million of total local and state taxes for the five years (See Table 5.11). The total investment increase (in-state and national) of the average city programs (both urban and small city) nearly doubled the state numbers (See National figures in Table 5.11). This indicated that building rehabilitation, new building construction, the initiation of joint venture projects, and the creation of jobs within the Main Street districts for the five year period produced a larger effect in the broader state and national economy.

Economic Activity within the City

Although there appeared to be economic changes within the active Main Street districts of Texas, this still remained implicit within literature of the TMSP itself. The claims of success for the Texas Main Streets (McKnight, 2002) as well as the preliminary findings of this study were unconfirmed by external resources. The data sets summarized below were analyzed to explain the nature and duration of economic activity within Texas cities. The average active MSC was compared with the average former MSC (the cities that dropped out of the program), and in some cases with the average non-MSC (all populated cities other than the Main Street Program cities) in Texas for the same five-year period (1997-2001). This was done, not only to reflect the economic changes taking place in the active Main Street cities, but also to compare those changes to other similar size cities in Texas and to give a better frame of reference regarding changes in the sub population groups. The findings were reviewed in six sub-population categories to better capture the effect of the program.

Employment and Jobs

Two sets of employment records were obtained and analyzed for the Texas cities and zip codes: Employment data based on households for the cities of Texas, and employment data based on employee records (called "Jobs" in this research) for the zip codes of Texas. Employment data (based on household) was found to be a less reliable set for this study because the employment data was for the city. In most cases it represented a larger geography than the zip code data (geographic definition used by the Jobs dataset).

The employment data was available for fewer numbers of Main Street cities than the Jobs data. Moreover, the rate of increase in employment based on household is not necessarily an indicator of the local economic revitalization since people simply do not always work where they live. Yet, both were included in the results because of their unique roles in explaining the employment patterns of Main Street cities in Texas from two different perspectives.

While the population of the average active MSC remained fairly stable in the period from 1997 through 2001, there appears to be an overall increase in the employment numbers, based on households, for all Texas cities. However, the five-year average rate of increase in employment in both an average non-MSC and average former MSC were slightly higher than the increased employment rate in the average active MSC (Table 5.13).

On the contrary, the average rate of job (based on zip code) increase in all active Main Street cities, based on employee numbers, was higher than that of former Main Street cities for the same five-year period (Table 5.12). However, a spatial breakdown of job data, with respect to the population of the cities, showed some mixed results. There were higher rates of increase in jobs in the active Main Street cities than in the former Main Street cities under 10,000-population cities (Table 5.14). The increase in jobs for the active Main Street cities was quite apparent in the 30,000 to 50,000-population category cities as well. On the other hand, former Main Street cities that had population between 10,001 and 30,000, seemed to have slightly higher rate of increase in job numbers compared to the active Main Street cities in the same population categories.

The increase in job numbers was more promising than the increase in employment numbers for the active Main Street cities. However, both jobs numbers and employment numbers not give as clear a message as the Reinvestment Summary jobs data for the districts of TMSP for the active Main Street cities.

Business Establishment

There was also a slight increase in the number of establishments within the active Main Street cities as opposed to a slight decline in the number of establishments in the former Main Street cities in Texas for the five-year period under investigation (Table 5.15). Spatial breakdown of the establishment data by city size illustrated that the average rate of increase in the number of establishments, compared to former Main Street cities, appeared to be higher in all the population categories under 50,000.

Dividing the cities to sub-population categories also revealed that the number of establishments in both the active urban city and the former urban city declined in this period. The rate of decline in the average active urban city was slightly higher than the average rate of decline of a former urban city (population above 50,000). Analyses of the establishment data further illustrated that the average rate of increase in the number of establishments in the average active MSC (population is 10,000 people or less and 30,001-50,000) was significantly higher than that of the former Main Street cities for the same population categories.

Even though the rate of increase in the number of establishments in active MSC was relatively small (1.09%), overall, the rate of increase in the number of establishment in

the average active MSC was higher than the average in former MSC (-2.48%). Indeed, of the active Main Street city managers almost 70% of them indicated an increase in the number of retail businesses in their district. These findings seemed to suggest that the number of businesses increased in the Main Street districts and cities that have been actively involved with the program rather than the ones that dropped out from the Main Street program.

New Sales Tax Permits

The analysis of the new sales tax permit data revealed that the number of permits issued in an average active MSC was significantly higher than that of the average former MSC, or in an average non-MSC. Between 1997 and 2001 an average active MSC issued 524 new sales tax permits whereas an average former MSC issued 406 permits and an average non-MSC issued 414 permits. A spatial breakdown of the new sales tax permit data showed that the number of permits issued in an average active MSC was higher than that of the average former MSC, or the average non-MSC for every population category. The number of new sales tax permit issued in the active Main Street cities indicates a more vital entrepreneurial activity in the active Main Street cities than in the former Main Street cities and the non-Main Street cities (See Table 5.17).

City Retail Trade (Subject to Sales Tax)

The five-year total taxable retail sales amount for an average active MSC was higher than that for the average former MSC or non-MSC. Between 1997 and 2001 the average active MSC generated approximately $8.3 million of taxable retail sales whereas the

average former MSC generated $7.4 million and an average non-MSC generated $5.9 taxable retail sales in Texas (Table 5.16). Spatial breakdown of this data further demonstrated that the taxable retail sales in the average active MSC, with few exceptions, was considerably higher than that of an average former MSC or non-MSC in sub population categories (See Table 5.18).

Similar to the findings from the number of establishment data and the number of new sales tax permit data the total dollar amount of retail sales data indicate that there was more economic activity in the active Main Street cities than in former Main Street cities and non-Main Street cities. Furthermore, as responses to Main Street program Manager's questionnaire, almost 70% of the active managers pointed out an increase in retail sales in their districts after they started the program. These findings suggest that the economic activity generated in the active Main Street districts and cities not only initiated a new entrepreneurship but also generated higher retail sales and increased sales tax revenues between 1997 and 2001 (Tables 5.15 and 5.18).

Commercial Property Values

The analysis of the Texas property values displayed a positive rate of increase in the commercial property values for all Texas cities (active, former, and non-Main Street cities) from 1997 through 2001 (Figure 5.9). While the commercial property values in an average active MSC were slightly lower than the average non-MSC, both active and non-MSC commercial property values were significantly higher than the average former MSC commercial property values (Table 5.19). Spatial breakdown of property data

further demonstrated that the increase in commercial property values occurred in the active small cities (population under 50,000) rather than in former Main Street cities. As part of the questionnaire results, almost 80% of the active Main Street managers pointed out an increase in property values in their district after they started the Main Street Program.

The higher increase in the commercial property values within active Main Street cities seemed to indicate that there was more demand for commercial property in these cities than the demand for commercial properties in the former Main Street cities. These finding also seemed to suggest that the demand for commercial property values in the active Main Street cities were as high as the demand for commercial property values in the non-Main Street cities for the five year period that was under investigation.

Active Main Street City vs. Former Main Street City, and Non-Main Street City

Overall, with the exceptions of the findings concerning the employment data (based on household), all indicators of economic changes within the Main Street cities reflected some positive change within the active Main Street cities as oppose to the former Main Street cities, and in some cases as opposed to the non-Main Street cities in Texas.

These economic changes varied between cities that were in different population categories. It seemed that smaller active Main Street Program cities (population under 50,000) have done relatively better than the larger active Main Street cities with population above 50,000), when their economic activities are compared to former Main Street cities and non-Main Street cities. Specifically, active small Main Street cities that

are under 10,000-population and those in the 30,001 to 50,000-population category have both shown stronger increases as opposed to former Main Street cities in the same population categories.

The rate of increase in some variables, such as the employment and the number of establishments, seems to be higher in the former Main Street cities in the 50,001 and above population category than in the active Main Street cities in the same category. As stated in the previous chapters this finding was not too bothersome since the larger urban areas have more complex economic dynamics than smaller ones. Perhaps what happens in a small downtown district may not be as visible in large city as it is in a small city due to the overall economic dynamics of a larger city.

Inversely, the findings seem to suggest that former Main Street cities fall behind in various economic activities under evaluation in this research as opposed to active Main Street cities. In some economic indicators, such as the number of new sales tax permits and the property values, the changes in economic activity in former Main Street cities not only was trailing active Main Street cities but also trailing non-Main Street cities. The reason for this is yet to unknown to this researcher and it is perhaps falls under the future scope of another study the data seems to suggest that dropping out from the program also takes away from further interest in investing in a Main Street city (See Smith, 2000 for factors affecting the active and inactive status of Main Street districts in Kentucky).

As stated earlier in more detail, among the four comparable variables for the non-Main Street Program cities, the number of new sales tax permits issued and the amount of retail sales were higher in the active Main Street cities than the non-Main Street Program cities. The commercial property values in the active Main Street cities were almost equal to non-Main Street Program cities in Texas. The employment numbers of for active Main Street cities was lower than non-Main Street cities for the period in between 1997-2001.

There was variation in the results of the sub-population categories. The data showed that active Main Street cities that are under 10,000-population, and are in 30,001 to 50,000-population category have shown stronger increases in the number of new sales tax permits, the total amount of retail sales and even in the commercial property values as oppose to non-Main Street cities. Obviously, this was considered an important finding since the data for non-MSC category was drawn from all the populated places in Texas.

Conclusions

Since the early 1940's revitalization ideas have been explored and tested for Main Streets and the CBD's by individual cities, private organizations, and governmental programs so as to bring life and vitality back to the Main Streets. Both the shape and the functions of downtowns, whether in small towns or large cities, have been modified to include pedestrian malls, entertainment districts, and shopping malls. Whatever solutions were introduced to these complex settings, they resulted in a few successes, but does not seem to reverse the process of the much acknowledge downtown decay. After all that

has been done to downtown space, the reason why downtowns often do not perform up to the social, cultural, economical, and physical expectations might be that we are not searching for the answer within the living laboratory of the downtown itself.

The burden put on solutions such as expecting a single building renovation to uplift an area, or changing the number of traffic lanes to accommodate automobile and pedestrian traffic, or writing a single ordinance or design guideline without implementation is not sufficient to revitalize a downtown. Urban design as a discipline and area of practice has emerged for this very reason, which is to look beyond the disciplinary boundaries of the fields which have a stake on downtowns' well being. There is a strong overriding need for a comprehensive and empirical understanding of the downtown where architecture, landscape architecture, planning, transportation engineering, and other fields often fell short when addressing problems only within their disciplinary perimeters.

The Main Street Program, as one of the several venues of downtown revitalization and urban design, laid a coherent foundation with its four-point approach for communities, over the past 25 years, to address the downtown decay. Even though the consequences of Main Street Program's comprehensive approach varied, city by city, state by state, the ground work, the guidance, the preparation to address the problems of CBD's, and the implementation of the program provided a valuable testing ground to explore the components of design and economy in downtown (Main Street) setting.

Therefore, within the broader question of whether design creates economic activity or not the objective of this particular research was three folded: To assess the changes that

took place in relation to four-point approach components, to assess the economy activity within the active Main Street districts, and to assess the economic activity within all other Main Street cities and non-Main Street cities in order to find the parallels between urban design and economy.

Findings revealed that several physical, promotional, organizational, and economical changes have taken place as a result of the Main Street Program's comprehensive four-point approach to downtowns districts through out Texas. It appears that these changes produced several positive outcomes for the physical, social, and cultural environment of the active Main Street cities. Moreover, the data suggests that these changes in the Main Street districts resulted in an increased economic activity, not only within the Main Street district by generating jobs, or producing private and/or public reinvestment, but also across the entire Main Street city by creating community wide economic activity. External resources, analyzed throughout this research, such as the number of jobs created, the number of establishment, the number of new sales tax permits, the amount of retail trade, and the commercial property values, support the Main Street Reinvestment Summary statistics have pointed out that positive economic activity has occurred in most active Main Street cities. This indicates that the Main Street program, part of which is urban design oriented, is having a positive effect on generating economic activity through the active Main Street communities in Texas.

This research was a step in the direction of establishing empirical evidence as to whether design improvements create economic activity and value. Drawing from the findings of

this study it seems that design improvements were one of the major contributing factors to economic activity taking place within the active Main Street program of Texas.

By making changes or improving the conditions of various design elements, in addition to making changes in other four-point approach parameters, active Main Street cities generated some economic benefit or value in their downtown districts for the five year period between 1997and 2001.

The design improvements were measured through the observations made through the eyes of the Main Street Managers in every city. The economic activity and value on this research was measured through parameters of monetary gains such as the retail trade or property value or quantifiable gains that could be translated into monetary gains such as creation of jobs or the increase in the number of businesses.

Even though after studying the empirical data and conducting a rigorous analysis stating a direct link between design and economic activity would be a premature one due to the complex nature of downtown. Cautions and limitations must be readdressed here to avoid the same gaps in previous research as reported in the literature covering this subject area:

This research only focused on the changes caused by implementation of the components of four-point approach and on the changes on the components of economic activity where the empirical data was available or could be obtained by systematic data collection methods.

Both the changes in four-point approach components and the changes in economic activity measured and analyzed only activities within the active Main Street cities of Texas. The additional economic activity data presented for the former Main Street cities and non-Main Street cities were included in the study to provide a relative frame of reference. Although it has been elaborated time to time in this dissertation how and why former Main Street cities dropped out of the program was out of the scope of this study.

This research does not claim an overall economic success for the Texas Main Street Program nor does it ignore the positive economic activity that has taken place within the active Main Street Program districts and cities in Texas for the time period under investigation.

The author of this research also acknowledges and re-emphasizes that the success of any given downtown cannot be explained only in monetary terms. Downtowns, as the places where public and private realms coincide, carry implicit, intangible, and qualitative meanings that are beneficial to the daily lives of the individuals living, sharing, and experiencing these spaces. Thus, the objective of this research was to contribute to the empirical understanding of urban design and economic activity within the Main Street districts. Although the list is still growing there are always new pieces of literature that address the health and the environmental value of urban design improvements (See such as Carmona in Macmillian, ed., 2004; McIndoe et al., 2005).

Stating these concerns and limitations, one may understandably argue that a city's economy is far more complex and chaotic than any district's economic well -being.

Furthermore, it could be argued that any given district's economy is far more complex than the components explained by addressing the four-point approach and external economic activity indicators. By looking at an aggregate of all Main Street cities one may argue that, while this claim may well be true for larger populated areas, the parallels, especially among the smaller cities and their Main Street districts, are quite striking and should not remain unnoticed.

The conclusions drawn above, pertaining the benefits of four-point approach and economic activity, have several theoretical implication for the field of urban design and practical implications for the Main Street Program.

Theoretical Implications

The implications of this study are broader than the application and the assessment of four-point approach and the economic activity within active Main Street communities of Texas. The findings of this study have important implications pertaining to the concerns presented in urban design, design and planning theories presented in the literature:

First and foremost, the design literature usually emphases the need for systematic research and evaluation methods in the design process (Holden, 1996; Francis, 1999; Lang, J., 1994, 1987; Marcus and Francis, 1998; Moughtin, 1999; Zeisel, 1981) in order to inform design. The objective set and methods undertaken here, within the context of Main Street Program, was an attempt to utilize this type of research, and perhaps set an example for others.

It is also important to understand that the urban design theory pursued here was an integration of both the procedural and substantive concerns along with the tangible and intangible issues embedded in any given physical setting. The basis of such research relies on specific procedures for establishing the objectives that a design must fulfill, and the substantive knowledge to those design principles to meet them (Lang, 1994). The research presented here was such an attempt to assess the workings of the Main Street Program approach and to assess the components urban design components inherent in the four-point approach. Following such an integrative approach not only included architectural concerns (such as the form, and the elements of form) predominantly highlighted within the literature, but also the planning literature (such as the dynamics of business and public affairs), and landscape architecture literature (such as environmental concerns). It is hoped that the methods and findings of this study will contribute to the study of urban design, a presently re-emerging discipline as well as an area of practice, as a knowledge-based activity.

The link between design and value (of all kinds such as economic, health, and environmental) should also be explored rigorously within the scope of theoretically well-grounded empirical research in order to benefit the livability of the urban settlements at large. This study focused on only one dimension of this concern which is the economic value.

Lastly, the issues faced in such complex settings (Downtowns & Main Street districts) require a deeper and more systematic understanding of its components. As suggested in the literature (Robertson, 2004; Lang, 1994) the realm of design evaluation (urban

design) within the context of a Main Street Program, must be empirical in order to better guide future urban design practice. This study provides findings that empirically support such concerns and a complete methodology that can be used repeatedly in assessing many other examples.

Practical Implications

There are three major practical implications suggested by this study for the Main Street Program and the urban design practice.

The increasing economic activity within the Main Street cities in Texas can be explained in part by the components of urban design. The Main Street Program is one of the least recognized urban design activities due to its recognition within the framework of historic preservation. As emphasized in the earlier program literature and in this research, the engagement of the Main Street Program with design is much broader than the preservation of historic buildings in the given Main Street city. The coverage of the Main Street Program practice exceeds the boundaries of the architecture and landscape architecture disciplines, and it is implicitly informed by the planning practice guidelines, procedures, and rules and regulations. However, there is limited engagement between the urban design literature and the Main Street program practice. This research hopes to broaden the avenues of thoughtful exchange, in both directions, to enhance the inter-disciplinary exchange of ideas among design and planning disciplines.

The scope of economic vitality generated by and resulting from competent urban design in the context of Main Street Program may vary depending on the city's size. The TMSP

has commonly treated cities in two different population categories: Small cities that have less than 50,000 population and Urban cities above 50,000. The findings of this research show that the size of the city is a serious determinant regarding which physical improvements and design challenges must be considered by a given city. Perhaps, engaging an approach adapted specifically to smaller population categories such as small cities population fewer than 10,000 might increase the success of the Main Street district revitalization and the overall success of the program.

Finally, this study provides data collection methods and techniques that may be useful for a city to self-evaluate its revitalization efforts in order to better address its needs. Even though not explicitly stated, the computer technology, especially geospatial data management and internet tools were widely used in this research to better assess downtown conditions. These tools present extraordinary opportunities for communities to self-evaluate, disseminate information, and to share their experiences across the state and nation so as to provide for more livable and successful Main Street cities.

Suggestions for Future Research

The author of this work considers it to be a preliminary, but vital and systematic attempt to better understand the complex relationship in between design and economic revitalization for numbers of cities. This study provides opportunities for continued research in other directions and scientific areas of study. The following are a few suggestions in this respect:

- Assess the economic revitalization impact of urban design improvements for the Main Street Program cities in cross- state or in a nationwide study.
- Assess the social, cultural, environmental, or visual value and impact of urban design improvements in Main Street Program cities.
- Examine the role of downtown morphology in revitalization.
- Run a comparison study of visual quality between former Main Street cities and active Main Street cities.

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APPENDIX A

Appendix A is the glossary of terms and description that have been used in the dissertation. These may include but not limited to operational definitions listed in the first chapter, and additional terms that is highlighted in the following chapters.

Exhibit A.1 Glossary

Block: A subdivision of a census tract (or, prior to 2000, a block numbering area), a block is the smallest geographic unit for which the Census Bureau tabulates 100-percent data. Many blocks correspond to individual city blocks bounded by streets, but blocks – especially in rural areas – may include many square miles and may have some boundaries that are not streets. The Census Bureau established blocks covering the entire nation for the first time in 1990. Previous censuses back to 1940 had blocks established only for part of the nation. Over 8 million blocks are identified for Census 2000 (US Census, 2003a).

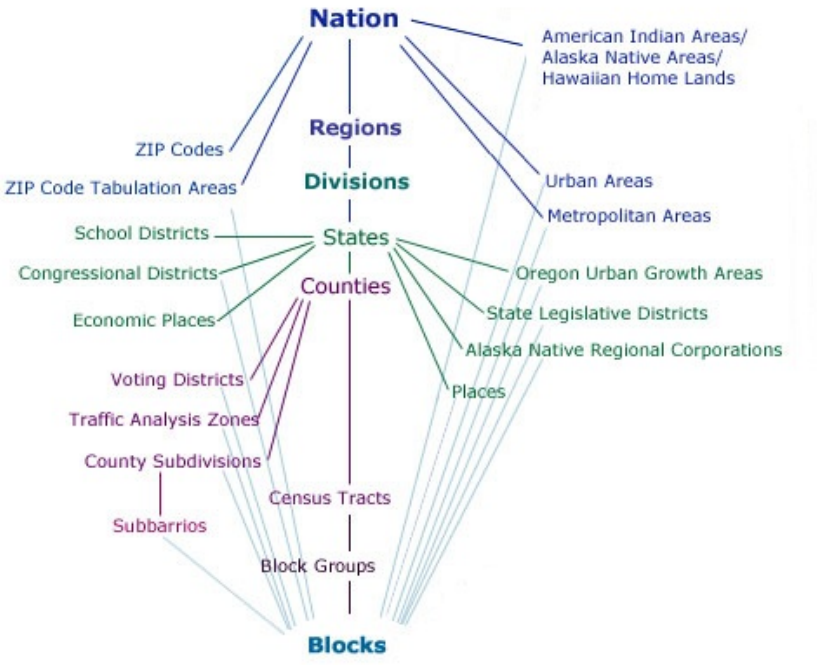
Block group (BG): A subdivision of a census tract (or, prior to 2000, a block numbering area), a block group is the smallest geographic unit for which the Census Bureau tabulates sample data. A block group consists of all the blocks within a census tract with the same beginning number (US Census, 2003a).

Census: A complete enumeration, usually of a population, but also of businesses and commercial establishments, farms, governments, and so forth (US Census, 2003a).

Census designated place (CDP): A statistical entity, defined for each decennial census according to Census Bureau guidelines, comprising a densely settled concentration of population that is not within an incorporated place, but is locally identified by a name. CDPs are delineated cooperatively by state and local officials and the Census Bureau,

following Census Bureau guidelines. Beginning with Census 2000 there is no size limits (US Census, 2003a).

Census geography: Through its many surveys, the Census Bureau reports data for a wide variety of geographic types, ranging from the entire *United States* down to a *Census Block*. The geographic types that a survey reports on will depend upon the survey's purpose, and how the data were collected (US Census, 2003a).



Reference: US Census, 2003a

The diagram shows the many geographic types for which data are available in FactFinder. In general, larger geographic types (e.g., state) are shown near the top and

smaller geographic types (e.g., census tract) are shown towards the bottom (US Census, 2003a).

Census tract: A small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other non-visible features in some instances; they always nest within counties. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment, census tracts average about 4,000 inhabitants. They may be split by any sub-county geographic entity (US Census, 2003a).

Central city: The largest city of a Metropolitan area (MA). Central cities are a basis for establishment of an MA. Additional cities that meet specific criteria also are identified as central cities. In a number of instances, only part of a city qualifies as central, because another part of the city extends beyond the MA boundary (US Census, 2003a).

Economic census: Collective name for the censuses of construction, manufactures, minerals, minority- and women-owned businesses, retail trade, service industries, transportation, and wholesale trade, conducted by the Census Bureau every five years, in years ending in 2 and 7 (US Census, 2003a).

Economic place: A statistical subdivision of a state delineated according to Census Bureau guidelines for the purpose of presenting economic census data. Economic places include incorporated places of 2,500 or more people, county subdivisions of 10,000 or

more people in 12 designated states, and census designated places in Hawaii. Any residual area within a state is delineated into Economic places so as not to cross the boundaries of any consolidated city, county subdivision in 12 designated states, metropolitan area in New England, or county (US Census, 2003a).

Employed: Employed includes all civilians 16 years old and over who were either (1) "at work" -- those who did any work at all during the reference week as paid employees, worked in their own business or profession, worked on their own farm, or worked 15 hours or more as unpaid workers on a family farm or in a family business; or (2) were "with a job but not at work" -- those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are people whose only activity consisted of work around the house or unpaid volunteer work for religious, charitable, and similar organizations; also excluded are people on active duty in the United States Armed Forces. The reference week is the calendar week preceding the date on which the respondents completed their questionnaires or were interviewed. This week may not be the same for all respondents (US Census, 2003a).

Labor force: The labor force includes all people classified in the civilian labor force, plus members of the U.S. Armed Forces (people on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard). The Civilian Labor Force consists of people classified as employed or unemployed (US Census, 2003a).

Place: A concentration of population either legally bounded as an incorporated place, or identified as a Census Designated Place (CDP) including comunidades and zonas urbanas in Puerto Rico. Incorporated places have legal descriptions of borough (except in Alaska and New York), city, town (except in New England, New York, and Wisconsin), or village (US Census, 2003a).

Unemployed: All civilians 16 years old and over are classified as unemployed if they (1) were neither "at work" nor "with a job but not at work" during the reference week, and (2) were actively looking for work during the last 4 weeks, and (3) were available to accept a job. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off, and were available for work except for temporary illness (US Census, 2003a).

Vacancy status: Unoccupied housing units are considered vacant. Vacancy status is determined by the terms under which the unit may be occupied, e.g., for rent, for sale, or for seasonal use only (US Census, 2003a).

Value: According to Carmona et al. in *The Value of Urban Design* "Value is a measure of the worth of something to its owner or any other person who derives benefit from it, this being the amount which it can be exchanged. Two concepts of value have been distinguished in economics: 'value in use'… and… 'value in exchange'". (Carmona et al., 2001)

APPENDIX B

Appendix B contains copy of 2001 Main Street Program selection criteria (small city), 2001 Urban Main Street Program selection criteria and the Eight Principles of Main Street components and definitions. These documents are copied from Main Street Program Application Packages provided by the Texas Main Street Program in 2001.

Exhibit B.1 2001 Small Main Street Selection Criteria

1. Evidence of commercial fabric in the inner core of community.

2. Demonstrated strong community support and a progressive community attitude.

3. Interest and commitment of private sector to downtown revitalization and historic preservation, including commitments to renovation, low-interest loan pool, and business development.

4. Interest and commitment of the governmental sector to downtown revitalization and historic preservation including downtown public improvements & preservation planning.

5. Proven commitment to the improving quality of life by existing private and public organizations.

6. Evidence of interest in economic and community development.

7. Good private investment record.

8. Effectiveness of the city government and professional staff.

9. The commitment of the city government to fund a local program to include manager's salary, operating expenses, as well as travel budget to attend training sessions.

10. Completion of major plans, and historic surveys in recent years.

11. Geographic distribution.

12. Need for downtown assistance.

Exhibit B.2 2001 Urban Main Street Selection Criteria

1. Evidence of consistent historic commercial fabric in the target area.

2. Progressive and cooperative community/neighborhood attitude.

3. Interest and commitment of private sector to target area's revitalization and historic preservation, including commitments to renovation, low-interest loan pool, and business development.

4. Interest and commitment of the governmental sector to target area's revitalization and historic preservation, including public improvements and preservation planning.

5. Proven commitment to improving the quality of life by existing private and public organizations.

6. Evidence of interest in economic and community development.

7. Good private investment record.

8. Effectiveness of the city government and professional staff.

9. The commitment of the city government and private sector organization(s) to fund a local Urban Main Street Program for a minimum of five years.

10. Completion of major plans, historic surveys, building surveys, business surveys and market studies in recent years in target area.

11. Statewide geographic distribution.

12. Evidence of committed assistance and cooperation from various departments of the city government.

13. Manageability of the target area.

14. Designation as a Certified Local Government by the Texas Historical Commission.

15. Viable commercial area.

16. Need for technical assistance

Exhibit B.3 The Eight Principles of Main Street

While the Main Street approach provides the format for successful revitalization, implementation of the four-point approach is based on eight principles that pertain to all areas of the revitalization effort. These eight principles describe all Main Street programs:

Comprehensive. Downtown revitalization is a complex process and cannot be accomplished through a single project. For successful long-term revitalization, a comprehensive approach must be used.

Incremental. Small projects and simple activities lead to a more sophisticated understandings of the revitalization process and help develop skills so that more complex problems can be addressed and more ambitious projects undertaken.

Self-Help. Local leaders must have the desire and the will to make the project successful. The National Main Street Center and the state Main Street Programs provide direction, ideas and training, but the continued and long-term success depends on the involvement and commitment of the community.

Public/Private Partnership. Both the public and private sectors have a vital interest in the economic health and physical viability of the downtown. Each sector has a role to play, and each must understand the other's strengths and limitations so that an effective partnership can be forged.

Identifying and Capitalizing on Existing Assets. Business districts must capitalize on the assets that make them unique. Every district has unique qualities—distinctive buildings and human scale that give people a sense of belonging. These local assets must serve as the foundation for all aspects of the revitalization program.

Quality. Quality must be emphasized in every aspect of the revitalization program. This applies equally to each element of the program, from storefront design to promotional campaigns to educational programs.

Change. Changes in attitude and practice are necessary to improve current economic conditions. Public support for change will build as the program grows.

Implementation-Oriented. Activity creates confidence in the program and ever greater levels of participation. Frequent, visible changes are a reminder that the revitalization effort is under way. Small projects at the beginning of the program pave the way for larger activities as the revitalization effort matures.

APPENDIX C

Appendix C contains the Institutional Review Board Approval for the Questionnaire, Cover Letters, Main Street Program Managers' Questionnaire form, and the list of the cities that are involved with Texas Main Street Program at one time or another. The list of cities is based on Texas Main Street Program Documentation from December 2001.

Exhibit C.1 Institutional Review Board Approval

TEXAS A&M UNIVERSITY
Office of the Vice President for Research
1112 TAMU • College Station, Texas 77843-1112
(979) 845-8585
FAX (979) 845-1855

August 29, 2001

MEMORANDUM

TO: Taner Ozdil
Department of Landscape Architecture and Urban Planning
MS 3137

SUBJECT: Review of Exempt IRB Protocol Entitled "Assessing the Economic Revitalization Impact of Urban Design Improvements: The Texas Main Street Program" 22001-167E

The above referenced protocol has been:

_X_ Approved August 29, 2001 – August 28, 2002
___ Conditionally Approved (see remarks below)
___ Disapproved (see remarks below)
___ Tabled (see remarks below)

by the Institutional Review Board - Human Subjects in Research.

The study has been approved for one year. Your protocol must be re-approved each year. If you desire to make any changes in your research protocol, the changes must be approved by the IRB before they are initiated. Any adverse reactions or events must be reported immediately to the Board.

Kerry Hope, Ph.D, Vice Chair

E. Murl Bailey, Chair
Institutional Review Board -
Human Subjects in Research

Exhibit C.2 Cover Letter I

TEXAS A&M UNIVERSITY
COLLEGE OF ARCHITECTURE
LANDSCAPE ARCHITECTURE & URBAN PLANNING

«Name», «Title» November 28, 2001
«Mailing_Address» «Address_Line_2»

Dear Main Street Program Manager:

We, at Texas A&M University, are studying the effectiveness of the Texas Main Street Program. I am conducting a study to measure the impact of design on downtown economic revitalization in active Texas Main Street Cities. We are looking at the changes that may occur after a city participates in the program.

139 cities in Texas have been involved with the program and 79 of those programs remain active. In order for the results to truly represent the changes and the impact on Texas Main Street Cities, it is important that each manager completes the questionnaire and returns it. We greatly appreciate your participation. Please know that your personal responses are extremely important to us.

This research project is supported by the Texas Main Street Program, and only aggregated responses will be made available to the program officials. Your individual response will be kept confidential. A copy of the study will be available to the participating cities through the Texas Main Street Program in Austin.

Each Main Street City in Texas will be assessed independently and comprehensively as a result of the study. Thus, the information that you provide will help your city's revitalization efforts as well as all other Texas Main Street communities. Information submitted will also support self-evaluation, decision-making, and the service efforts of the Texas Main Street Program.

Thank you for your help in providing insight on the effect of design on downtown economic revitalization in Texas Main Street Cities. Your survey is very important to the success of this study and to the future of Main Street revitalization efforts in Texas. It is important that the questionnaire be returned by December 21, 2001. If you have any questions you can contact me at taner@tamu.edu or by telephone at
(979) 458-0628.

"I understand that this research study has been reviewed and approved by the Institutional Review Board -Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, I can contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Support Services, Office of Vice President for Research at (979) 458-4067 or E-mail: mwbuckley@tamu.edu."

Thank you again for your important and critical participation.

Sincerely,
Taner R. Ozdil, Researcher

Exhibit C.3 Cover Letter II

TEXAS A&M UNIVERSITY
COLLEGE OF ARCHITECTURE
LANDSCAPE ARCHITECTURE & URBAN PLANNING

«Name», «Title» January 16, 2002
«Mailing_Address» «Address_Line_2»

Dear Main Street Program Manager:
About four weeks ago I wrote to you seeking your opinion on the impact of design on downtown economic revitalization in Active Texas Main Street Program Cities. We are looking at the changes that may occur after a city participates in the program. As of today we have not yet received your completed questionnaire.

We have undertaken this study because of the belief that Main Street Managers' knowledge and expertise should be taken into account to assess the impact of the Main Street Program to Active Texas Main Street Cities revitalization. We believe that assessing each Main Street City in Texas independently and comprehensively will help your city's revitalization efforts as well as helping other Texas Main Street communities in the future. We also believe that information submitted will also support self-evaluation, decision-making, and the service efforts of the Texas Main Street Program.

I am writing to you again because I want to emphasize the significance of each response to the questionnaire for the usefulness of the study. There are 139 cities in Texas that have been involved with the program and 79 of those programs remain active. In order for the results to truly represent the changes and the impact on Texas Main Street Cities, it is important that **Each Main Street City Manager** completes the questionnaire and returns it. We greatly need and appreciate your participation. Please know that your personal responses are extremely important to us.

Thank you for your help one more time in providing insight on the effect of design on downtown economic revitalization in Texas Main Street Cities. Your survey is very important to the success of this study and to the future of Main Street revitalization efforts in Texas. It is important that the questionnaire be returned by February 8, 2002. If you have any questions you can contact me at taner@tamu.edu or by telephone at (979) 458-0628.

"I understand that this research study has been reviewed and approved by the Institutional Review Board -Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, I can contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Support Services, Office of Vice President for Research at (979) 458-4067 or E-mail: mwbuckley@tamu.edu."

In the event that your questionnaire and the pre-paid envelope have been misplaced, replacements are enclosed. Thank you again for your important and critical participation.

Sincerely,
Taner R. Ozdil, Researcher

Exhibit C.4 Texas Main Street Program Cover Letter

TEXAS HISTORICAL COMMISSION
The State Agency for Historic Preservation

RICK PERRY, GOVERNOR
JOHN L. NAU, III, CHAIRMAN
F. LAWERENCE OAKS, EXECUTIVE DIRECTOR

November 30, 2001

Dear Texas Main Street Manager:

This year, we have been assisting the Department of Landscape Architecture and Urban Planning at Texas at A&M University on a Main Street self-evaluation project. *Study of the Main Street Program* specifically focuses on assessing the impact of the *four-point approach* on Texas Main Streets' downtown and neighborhood economy.

To help the researchers at Texas A& M draw significant conclusions, we ask each Main Street Manager to respond to the questionnaire, to best of your knowledge. As it is stated in the questionnaire's cover letter, each of your responses will remain confidential and only accumulated results of the study will be provided to Texas Main Street Program by Texas A&M University.

The Texas Main Street Center supports Texas universities on research and studies and we appreciate your assistance and cooperation. The researchers at Texas A&M have worked very hard to prepare this survey. If you have any questions regarding the *Study of the Main Street Program*, please call Mr. Taner R. Ozdil at (979) 458-0628.

Sincerely,

Kim McKnight
Program Specialist
Texas Main Street Program
Texas Historical Commission

P.O. BOX 12276 · AUSTIN, TX 78711-2276 · 512/463-6100 · FAX 512/475-4872 · TDD 1-800/735-2989
www.thc.state.tx.us

Exhibit C.5 Managers' Questionnaire

Main Street Program Managers' Questionnaire

Dear Main Street Program Manager:
We, at Texas A&M University are studying the effectiveness of the Texas Main Street Program. Your participation is extremely important to us. Thank you for your help in providing insight on the effect of design on economic revitalization of downtown in Texas Main Street Cities.

Part 1: Please complete the following by checking or filling the one appropriate box.

Title:	θ Main Street Program Manager	θ Other _____ (fill in)

City:	_____ (fill in)

Gender:	θ Female	θ Male

Years of experience in Main Street Program Management in your current city: _____ (fill in)

Part 2: As you know, the Texas Main Street Program uses a Four Point Approach. Rank each of the four factors:

Design
Promotion
Organization
Economic Restructuring

based on their impact on the revitalization of your Main Street district. Fill in each of the following boxes with one of the four factors above. Box number **1** represents the factor having the **most significant impact**, and **4** represents the factor having the **least significant impact**.

1._____	2._____	3._____	4._____

Part 3: QUESTIONS **1 – 60** (from **A** to **D**) REFER TO MAIN STREET CITIES And DISTRICTS THAT HAVE BEEN SELECTED AND GUIDED BY THE MAIN STREET PROGRAM

1 = If you think this factor has **significantly decreased**
2 = If you think this factor has **decreased**
3 = If you think this factor has **not changed**
4 = If you think this factor has **increased**
5 = If you think this factor has **significantly increased**
NA If you think this question is **not applicable** for your city
DK If you think you **do not know** the answer for this question

A: DESIGN
The following questions measure the Design improvements that have been promoted by the Main Street Program. Please indicate increases or decreases by circling or checking your answer.

1. Number of on street parking spaces within the district……[1] [2] [3] [4] [5] [NA] [DK]
2. Number of garage and open lot parking space within the district……[1] [2] [3] [4] [5] [NA] [DK]
3. Number of parking space in walkable distance to the district (max. 600 feet)[1] [2] [3] [4] [5] [NA] [DK]
4. Number of traffic lanes dedicated to automobiles in your Main St. district. [1] [2] [3] [4] [5] [NA] [DK]
5. Allowed traffic speed in your Main Street district…… [1] [2] [3] [4] [5] [NA] [DK]
6 Sidewalk width in your Main Street district…… [1] [2] [3] [4] [5] [NA] [DK]
7. Sidewalk & pavement quality within your district
(Paving color, texture, material, etc.)…… [1] [2] [3] [4] [5] [NA] [DK]

8. Number & the quality of handicap related equipment & improvements within your district (Railings, ramps, signs, curb cuts, etc.)…….. [1] [2] [3] [4] [5] [NA] [DK]
9. Number and the quality of bicycle related equipment & improvements (bicycle lanes, signs, lockers, & etc.) …… [1] [2] [3] [4] [5] [NA] [DK]
10. Number and the quality of loading zones and transportation stops (bus stops, cab stands, delivery and mail truck pockets, etc.) …… [1] [2] [3] [4] [5] [NA] [DK]
11. Number and the quality of outdoor seating within your district……. [1] [2] [3] [4] [5] [NA] [DK]
12. Number of street trees within your district……. [1] [2] [3] [4] [5] [NA] [DK]
13. Amount and the quality of greenery within your district (Other than trees, such as; flower beds, shrubs, pots of plants, grass, etc.) ……. [1] [2] [3] [4] [5] [NA] [DK]
14. Number and the quality of street furniture within your district (Trash cans, kiosks, fences, banners, drinking fountains, etc.) ……. [1] [2] [3] [4] [5] [NA] [DK]
15. Number of public outdoor displays within the district (Such as outdoor sculptures, murals, ornamental & interactive fountains, etc.) ……. [1] [2] [3] [4] [5] [NA] [DK]
16. Number and the quality of banners, posters, advertisements within your district……. [1] [2] [3] [4] [5] [NA] [DK]
17. Quality of signage within your district…….. [1] [2] [3] [4] [5] [NA] [DK]
18. Number and the quality of lighting within your Main Street district……. [1] [2] [3] [4] [5] [NA] [DK]
19. Number and the quality of outdoor cafes, restaurants, and food stands, within your district……. [1] [2] [3] [4] [5] [NA] [DK]
20. Number and the quality of canopies, awnings, trellises, shades within your district …… [1] [2] [3] [4] [5] [NA] [DK]
21. Number and the quality of renovated and/or improved storefront (window displays, street level façade, etc.) within your district…… [1] [2] [3] [4] [5] [NA] [DK]
22. Number and the quality of renovated and/or improved building facades (Upper façade,) within your district…… [1] [2] [3] [4] [5] [NA] [DK]
23. Number and the quality of public bathrooms within your district……. [1] [2] [3] [4] [5] [NA] [DK]
24. Number and the quality of the public open spaces (Plazas, market areas, pedestrian pockets, play areas for children, etc.)…… [1] [2] [3] [4] [5] [NA] [DK]
25. Streetscape Maintenance activity within the district…….. [1] [2] [3] [4] [5] [NA] [DK]
26. Number of pedestrian visiting the main street district…… [1] [2] [3] [4] [5] [NA] [DK]
27. Amount of crime within the district…… [1] [2] [3] [4] [5] [NA] [DK]

B: PROMOTION

The following questions measure the changes in ***Promotional*** activities that have been addressed by the Main Street Program. Please indicate increases or decreases by circling or checking your answer.

28. Level of activities to promote the historic buildings of your district…….. [1] [2] [3] [4] [5] [NA] [DK]
29. Level of activities to promote the historic heritage of your district…… [1] [2] [3] [4] [5] [NA] [DK]
30. Level of activities to promote the retail goods and services offered by downtown businesses…… [1] [2] [3] [4] [5] [NA] [DK]
31. Level of activities to create a healthy image of your Main Street district…. [1] [2] [3] [4] [5] [NA] [DK]
32. Number and the variety of special events to promote the Main Street district (flea market, festivals, concerts, and etc.)……. [1] [2] [3] [4] [5] [NA] [DK]
33. Activities to define & promote the position of the Main Street district within the overall market…… [1] [2] [3] [4] [5] [NA] [DK]
34. Number of activities to promote *Main Street Revitalization Program*…… [1] [2] [3] [4] [5] [NA] [DK]

C: ORGANIZATION

The following questions measure the changes in ***Organizational*** activities that have been addressed by the Main Street Program. Please indicate increases or decreases by circling or checking your answer.

35. Community support by participating in events (and other passive help)… [1] [2] [3] [4] [5] [NA] [DK]
36. Community support by volunteering (and other active help)……..…… [1] [2] [3] [4] [5] [NA] [DK]
37. Community representation in an advisory capacity ……[1] [2] [3] [4] [5] [NA] [DK]

38. Work plan adherence *Four Point Approach*……[1] [2] [3] [4] [5] [NA] [DK]
39. Public-private partnership……[1] [2] [3] [4] [5] [NA] [DK]
40. Committed & dependable funding sources for the private & public activities [1] [2] [3] [4] [5] [NA] [DK]
41. Number of new organizations (for profit, or not-for-profit) established in relation to Main Street district and the program…… [1] [2] [3] [4] [5] [NA] [DK]
42. Level of activity within the *Design* Committee …… [1] [2] [3] [4] [5] [NA] [DK]
43. Level of activity within the *Promotion* Committee…… [1] [2] [3] [4] [5] [NA] [DK]
44. Level of activity within the *Economic Restructuring* Committee……[1] [2] [3] [4] [5] [NA] [DK]
45. Level of activity within the *Organization* Committee…….…… [1] [2] [3] [4] [5] [NA] [DK]
46. Level of activity among the Main Street committees…… [1] [2] [3] [4] [5] [NA] [DK]

D: ECONOMIC RESTRUCTRING

The following questions measure the changes in ***Economic*** activities that have been addressed by the Main Street Program. Please indicate increases or decreases by circling or checking your answer.

47. Typical ground-floor rental rates within your Main Street district…… [1] [2] [3] [4] [5] [NA] [DK]
48. Ground-floor occupancy rate (not vacancy rate) within your district…… [1] [2] [3] [4] [5] [NA] [DK]
49. Upper-floor occupancy rate (not vacancy rate) within your district…… [1] [2] [3] [4] [5] [NA] [DK]
50. Retail sales volume within your district……[1] [2] [3] [4] [5] [NA] [DK]
51. Property values within your district…… [1] [2] [3] [4] [5] [NA] [DK]
52. The variety of tenant mix within your district…… [1] [2] [3] [4] [5] [NA] [DK]
33. Number of retail businesses (not including cafes and restaurants) within your district……[1] [2] [3] [4] [5] [NA] [DK]
54. Number of cafes and restaurants within your district…… [1] [2] [3] [4] [5] [NA] [DK]
55. Number of locally owned "mom-and-pop" businesses within your district.. [1] [2] [3] [4] [5] [NA] [DK]
56. Number of housing units within your district…… [1] [2] [3] [4] [5] [NA] [DK]
57. Number of incentive programs for your Main Street district to stimulate commercial development…… [1] [2] [3] [4] [5] [NA] [DK]
58. Number of incentive programs for your district to stimulate real estate development …… [1] [2] [3] [4] [5] [NA] [DK]
59. Number of long-term economic development strategies and projects for your district…… [1] [2] [3] [4] [5] [NA] [DK]
60. Market share of the Main St. district in the overall marketplace of the city [1] [2] [3] [4] [5] [NA] [DK]

Part 4: If you do have additional concerns and comments, please use the following section to list them:

Thank you!

Your participation will be extremely helpful. You are provided with a prepaid return envelope in the Questionnaire Package. Please complete and return this questionnaire to following address by December 08.2001

If the envelope is missing, please return your questionnaire to:

Mr. Taner R. Ozdil, Researcher
Study of the Main Street Program
College of Architecture
Department of Landscape Architecture & Urban Planning
Texas A&M University
College Station, Texas 77843-3137

If you have any concerns about the questionnaire call: Mr. Taner R. Ozdil Phone # (979) 458-0628
Track no: 0000

Exhibit C.6 Texas Small Main Street Cities, 1981-2001

SMALL CITIES PROGRAM,

1981 Plainview Seguin	**1982** Georgetown	**1983** Brenham Harlingen Lufkin	**1984** Goliad Grapevine Paris	**1985** Corsicana
1986 Greenville Pittsburg San Marcos	**1987** Post Weatherford	**1988** Gonzales Henderson	**1989** Denison Fort Stockton Mineola	**1990** Elgin Jasper
1991 Angleton New Braunfels	**1992** Bay City Cleburne McGregor Mount Vernon	**1993** Mount Pleasant Van Alstyne	**1994** Decatur Graham Marlin Sonora	**1995** Alpine Bonham Clifton Kerrville Rusk
1996 Fairfield La Grange Quanah	**1997** Bowie Breckenridge Celina Ferris Weslaco	**1998** Electra Gilmer Levelland Monahans Nacogdoches	**1999** Gatesville Gladewater Shiner Taylor Whitewright	**2000** Eagle Lake Farmersville Freeport
2001 Canton Carhage Floresville Huntsville				

Exhibit C.7 Texas Urban Main Street Cities, 1981-2001

URBAN CITIES PROGRAM,

1990 Denton Tyler	**1991** Houston Market Sq. Odessa	**1992** Beaumont San Antonio - Southtown	**1994** Dallas MLK	**1995** Irving
1998 Garland Port Arthur San Antonio - Midtown				

Exhibit C.8 Texas Self-Initiated Main Street Cities, 1981-2001

SMALL SELF-INITIATED CITIES	URBAN SELF-INITIATED CITIES
Cedar Hill San Benito West Columbia	Amarillo

Exhibit C.9 Texas Former Main Street Cities, 1981-2001

FORMER CITIES

Abilene	Alvin	Athens	Belton	Big Spring
Bishop	Brownwood	Bryan	Center	Conroe
Cooper	Cuero	Daingerfield	Dallas Oak Cliff	Dallas City Center
Duncanville	Eagle Pass	Edinburgh	El Campo	Ennis
Floresville	Fort Worth Polytec	Gainesville	Glen Rose	Hillsboro
Houston Heights	Kilgore	Kingsville	Lampasas	Lancaster
Lewisville	Littlefield	Lockhart	Longview	Marshall
McKinney	Mineral Wells	Mission	Navasota	Olton
Palestine	Pampa	Port Lavaca	Sherman	Sinton
Stamford	Sulphur Springs	Sweetwater	Taylor	Temple
Terrell	Tomball	Uvalde	Waxahachie	Wharton
Whitesboro	Wichita Falls	Yoakum		

APPENDIX D

Appendix D contains the Average Main Street City Manager Response Aggregated Results. Each exhibit display results by City size, and Year of involvement with the Program. All cities included are active participants of the Main Street program as of December 2001.

Exhibit D.1 Average Main Street City Manager Response by City size & Time spent with the Program: Design

*	**Small City,** 5 year & older n=39							**Small City,** Less than 5 year n=14						**Urban City,** 5 year & older n=5							
Q#	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**
1	2.6	7.7	51.3	17.9	12.8	5.1	2.6			71.4	14.3	14.3				20	40	40			
2	2.6	7.7	53.8	20.5	2.6	12.8		7.1		42.9	7.1	14.3	28.6				60	40			
3		5.1	48.7	33.3	10.3	2.6				57.1	14.3	21.4	7.1				40	40	20		
4	2.6	2.6	79.5	7.7	2.6	5.1				92.9		7.1				20	80				
5	5.1	5.1	79.5	5.1		5.1				85.7		7.1		7.1			100				
6		5.1	66.7	15.4	10.3		2.6			78.6	7.1	7.1	7.1				40		60		
7	2.6	10.3	25.6	17.9	43.6					57.1	14.3	21.4	7.1				20		80		
8	2.6		17.9	35.9	41.0	2.6				42.9	28.6	28.6					40	20	40		
9	5.1		76.9	2.6		15.4				64.3	7.1		28.6				80	20			
10	2.6		61.5	17.9		17.9				57.1	7.1	7.1	28.6				60	40			
11	2.6		28.2	43.6	20.5	5.1				35.7	28.6	28.6	7.1				40		60		
12	2.6	7.7	41.0	25.6	17.9	5.1		7.1		64.3	14.3	7.1	7.1				40	20	40		
13	2.6	2.6	12.8	43.6	38.5					21.4	64.3	14.3					20	20	60		
14		5.1	20.5	38.5	35.9					35.7	50.0	14.3					40	60			
15	2.6	2.6	41.0	28.2	20.5	5.1		7.1		57.1	14.3	14.3	7.1				20	60	20		
16	5.1	5.1	23.1	46.2	20.5					50.0	28.6	21.4					40	60			
17	5.1	5.1	12.8	51.3	25.6					28.6	50.0	21.4					20	60	20		
18	2.6	2.6	28.2	30.8	30.8	5.1				35.7	21.4	35.7		7.1			20	60	20		20
19	7.7	2.6	41.0	30.8	10.3	5.1	2.6			57.1	35.7	7.1					20	40	40		
20	5.1	2.6	15.4	56.4	20.5					28.6	57.1	14.3					40	20	40		
21		2.6	5.1	46.2	46.2					7.1	50.0	42.9					20	20	60		
22	2.6	2.6	7.7	46.2	41.0					14.3	50.0	35.7						40	60		
23	2.6	7.7	64.1	7.7	10.3	7.7		7.1		78.6	7.1	7.1					100				
24	5.1	2.6	43.6	41.0	2.6	5.1			7.1	50.0	35.7	7.1					40	60			
25	2.6	2.6	23.1	46.2	23.1		2.6			42.9	28.6	21.4		7.1			20	60	20		
26		2.6	7.7	59.0	23.1		7.7			7.1	50.0	35.7		7.1			20	60	20		
27	15.4	33.3	33.3	2.6		5.1	10.3		21.4	64.3			7.1	7.1		80	20				

Exhibit D.2 Average Main Street City Manager Response by City size & Time spent with the Program: Promotion

*	Small City, 5 year & older n=39							Small City, less than 5 year n=14							Urban City, 5 year & older n=5						
Q#	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**
1	2.6	2.6	15.4	56.4	23.1					14.3	78.6	7.1					20	80			
2		5.1	10.3	61.5	23.1					14.3	71.4	14.3					20	80			
3		2.6	7.7	71.8	17.9					7.1	71.4	21.4					20	60	20		
4			7.7	66.7	23.1		2.6				71.4	28.6						40	60		
5	5.1		10.3	53.8	30.8				7.1		64.3	28.6						40	60		
6	2.6	2.6	10.3	64.1	17.9	2.6			7.1		71.4	21.4					20	40	40		
7	2.6		15.4	71.8	7.7		2.6		7.1		71.4	21.4					20	40	40		

Exhibit D.3 Average Main Street City Manager Response by City size & Time spent with the Program: Organization

*	Small City, 5 year & older n=39							Small City, less than 5 year n=14							Urban City, 5 year & older n=5						
Q#	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**
1	2.6		7.7	56.4	33.3						64.3	35.7					20	40	40		
2		2.6	10.3	69.2	17.9					7.1	57.1	35.7					20	40	40		
3	2.6	5.1	10.3	59.0	17.9		5.1	7.1		14.3	57.1	21.4					40	20	40		
4	5.1	12.8	17.9	53.8	10.3					14.3	57.1	28.6					20	40	40		
5		5.1	20.5	66.7	7.7			7.1		14.3	35.7	42.9					20	20	60		
6	2.6	2.6	15.4	64.1	12.8		2.6		7.1	14.3	50.0	28.6						60	40		
7	2.6	2.6	28.2	51.3	7.7		7.7	7.1		35.7	57.1						60	20	20		
8	5.1	7.7	15.4	53.8	15.4	2.6				14.3	35.7	50.0					20	60	20		
9	2.6	5.1	17.9	43.6	28.2	2.6				7.1	57.1	35.7						80	20		
10	7.7	7.7	15.4	59.0	7.7	2.6				21.4	50.0	28.6				20		80			
11	5.1	12.8	28.2	41.0	10.3	2.6			7.1	21.4	64.3	7.1					40	40	20		
12		10.3	20.5	46.2	20.5	2.6				21.4	50.0	28.6					20	40	40		

Exhibit D.4 Average Main Street City Manager Response by City size & Time spent with the Program: Economic Restructuring

*	Small City, 5 year & older n=39							Small City, less than 5 year n=14							Urban City, 5 year & older n=5						
Q#	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**	**SD**	**D**	**NC**	**I**	**SI**	**NA**	**DK**
1		2.6	25.6	46.2	20.5	5.1			7.1	42.9	35.7	7.1	7.1					60	20		20
2	10.3		12.8	46.2	25.6		5.1			14.3	57.1	14.3	7.1	7.1			20	20	60		
3	2.6	2.6	30.8	41.0	15.4	7.7				50.0	21.4	7.1	14.3	7.1			20	20	40	20	
4	2.6	2.6	7.7	61.5	7.7	17.9			7.1	7.1	50.0	14.3	7.1	14.3			20	40	20		20
5			15.4	53.8	25.6	2.6	2.6			21.4	57.1	14.3	7.1				20	40	40		
6	2.6	5.1	43.6	43.6	5.1					28.6	50.0	7.1	7.1	7.1		20		60	20		
7	2.6	10.3	15.4	56.4	12.8	2.6				28.6	64.3	7.1				20	20	40	20		
8	2.6	5.1	23.1	56.4	7.7	5.1		7.1		57.1	28.6	7.1						80	20		
9		7.7	38.5	38.5	10.3	5.1				35.7	57.1	7.1					20	60	20		
10	2.6	2.6	43.6	25.6	12.8	7.7	5.1			64.3	14.3		21.4				20	40	40		
11	2.6	5.1	28.2	46.2	15.4		2.6	7.1		21.4	64.3	7.1					40	60			
12	2.6	7.7	38.5	41.0	7.7		2.6	7.1		35.7	42.9	14.3					20	60		20	
13	5.1	5.1	33.3	46.2	7.7		2.6			42.9	42.9	14.3					20	60		20	
14			30.8	43.6	7.7		17.9			14.3	57.1	7.1	14.3	7.1			20	60		20	

* n=58, Active Member All Cities by Year of Involvement and size

APPENDIX E

Appendix E contains PC I-O Economic Impact Model Definitions and Tables. There are five exhibits in this section; Technical details and definitions of the input-output RSRC PC I-O model developed by Regional Science Research Corporation (RSRC), In-state Economic and Tax Impact of Annual Texas Main Street Activity, and National Economic and Tax Impacts of Annual Texas Main Street Activity (The Center for Urban Policy Research, 1999).

Exhibit E.1 In-State Economic Impacts

In-State Economic and Tax Impacts of Annual Texas Main Street Activity ($97 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	8	35	190
2. Agri. Serv., Forestry, & Fish	14	133	244
3. Mining	15	431	1,365
4. Construction	570	15,531	16,735
5. Manufacturing	151	5,247	8,448
6. Transport. & Public Utilities	38	1,691	3,947
7. Wholesale	27	1,695	3,975
8. Retail Trade	882	14,893	21,886
9. Finance, Ins., & Real Estate	64	2,073	8,967
10. Services	608	13,750	21,233
Private Subtotal	2,376	55,478	86,990
Public			
11. Government	32	574	807
Total Effects (Private and Public)	2,409	56,053	87,796
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	1,689	38,549	53,365
2. Indirect and Induced Effects	720	17,504	34,432
3. Total Effects	2,409	56,053	87,796
4. Multipliers (3÷1)	1.426	1.454	1.645
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages—Net of Taxes			43,303
2. Taxes			
a. Local			4,877
b. State			4,964
c. Federal			
General			9,482
Social Security			7,199
Federal Subtotal			16,681
d. Total taxes (2a+2b+2c)			26,522
3. Profits, dividends, rents, and other			17,971
4. Total Gross State Product (1+2+3)			87,796
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			24.9
Income			$580,618
State Taxes			$51,423
Local Taxes			$50,514
Gross state Product			$909,433

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (State)—the proportion of tourism expenditures on goods and services produced in Texas.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1998.

Exhibit E.2 National Economic Impacts

National Economic and Tax Impacts of Annual Texas Main Street Activity ($97 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	14	858	1,590
2. Agri. Serv., Forestry, & Fish	28	492	677
3. Mining	31	1,435	4,277
4. Construction	596	16,549	17,807
5. Manufacturing	560	21,903	31,199
6. Transport. & Public Utilities	160	7,866	15,894
7. Wholesale	55	2,944	7,458
8. Retail Trade	1,230	21,763	29,641
9. Finance, Ins., & Real Estate	312	11,028	25,070
10. Services	1,059	26,386	35,103
Private Subtotal	4,046	111,225	168,716
Public			
11. Government	95	1,643	1,812
Total Effects (Private and Public)	4,141	112,868	170,528
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	1,777	40,813	56,297
2. Indirect and Induced Effects	2,363	72,055	114,231
3. Total Effects	4,141	112,868	170,528
4. Multipliers (3÷1)			
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages—Net of Taxes			91,708
2. Taxes			
a. Local			9,482
b. State			10,409
c. Federal			
General			18,988
Social Security			14,417
Federal Subtotal			33,405
d. Total taxes (2a+2b+2c)			53,295
3. Profits, dividends, rents, and other			25,525
4. Total Gross Domestic Product (1+2+3)			170,528
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			42.9
Income			$1,169,138
State Taxes			$107,817
Local Taxes			$98,215
Gross Domestic Product			$1,766,406

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (National)—the proportion of Texas rehabilitation project expenditures on goods and services produced in the nation.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1998.

VITA

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M.L.A.	Masters Degree in Landscape Architecture, College of Architecture, University of Colorado at Denver, 1996
B.S.	Bachelor of Science in Landscape Architecture, Faculty of Agriculture, University of Ankara, Turkey, 1992

EXPERIENCE

2000 – 2006	Assistant Lecturer, Department of Landscape Architecture & Urban Planning, Texas A&M University
1993 – 1999	Teaching & Research Assistant, Faculty Development Abroad Participant, 18 Mart University, Çanakkale, Turkey
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